Product Datasheet

10-port Gigabit Managed Industrial bt PoE Switch

(ONV-IPS33108PFM-bt)

OVERVIEW

The ONV-IPS33108PFM-bt is a Gigabit managed industrial bt PoE switch independently developed by ONV. It has 8*10/100/1000Base-T adaptive RJ45 and 2*100/1000Base-X uplink SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at/bt PoE standard and the single-port PoE power output is 90W. As a PoE power supply device, it can automatically detect and recognize the power-receiving equipment that meets the standard and supply power through the network cable. It provides stable and safe terminals for PTZ network domes, high-power wireless AP, high-power network multimedia speakers, and high-power PoE lighting through a network cable to meet the network environment that needs a high-density PoE power supply. It is suitable for intelligent transportation, rail transit, electric power, mining, metallurgy, green energy, and industrial scenes such as construction to set up a cost-effective and stable communication network.

The ONV-IPS33108PFM-bt has L2+ network management function, supports IPV4/ IPV6 management, 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) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. When a 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

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.

◇ Support Gigabit RJ45 port and SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Smart PoE power supply

◇ Set on the Web network management interface to control the PoE port power supply based on the user-defined time period.

◇ Comply with IEEE 802.3 af/at/bt PoE standard, automatically identify PoE devices for power supply, and not damage 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.

◇ 8*10/100/1000Base-T RJ45 ports can support bt PoE power supply, meeting the demand for super high power PoE power supply in various scenarios.

■ Strong business processing ability

◇ Support ERPS ring network and STP/ RSTP/ MSTP to eliminate layer 2 loops and realize link backup.

- ◇ Support IEEE 802.1Q VLAN, users can flexibly divide VLAN according to needs, support Voice VLAN and QinQ configuration.
- ◇ Support static and dynamic aggregation to effectively increase link bandwidth, realize load balancing, link backup, and improve link reliability.
- ◇ Support QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.
- ◇ Support ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.
- ◇ Support IGMP V1/V2/V3 multicast protocol and IGMP Snooping to meet multi-terminal high-definition video surveillance and video conference access requirements.

■ Security

- ◇ Port isolation and storm control.
- ◇ IP+MAC+port+VLAN quadruple flexible combination binding function.
- ◇ 802.1X authentication provides authentication functions for LAN computers, and controls the authorization status of controlled ports according to the authentication results.

■ Stable and reliable

- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, and PoE.
- ◇ Low power consumption, aluminum alloy housing, and excellent heat dissipation to ensure stable operation of the switch.

■ Easy O&M management

- ◇ Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.
- ◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

- ◇ Support HTTPS, SSLV3, SSHV1/V2, and other encryption methods, making management more secure.
- ◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.
- ◇ Support Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet and other diversified management and maintenance methods.

TECHNICAL SPECIFICATION

Model	ONV-IPS33108PFM-bt
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 2*100/1000Base-X uplink SFP fiber ports (Data) 8*10/100/1000Base-T bt PoE ports (Data/ Power) 2 set V+, V- redundant DC power port (6P industrial Phoenix terminal)
Ethernet Port	Port 1-8 can 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)
Optical Fiber Port	Gigabit 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 Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	20Gbps (non-blocking)

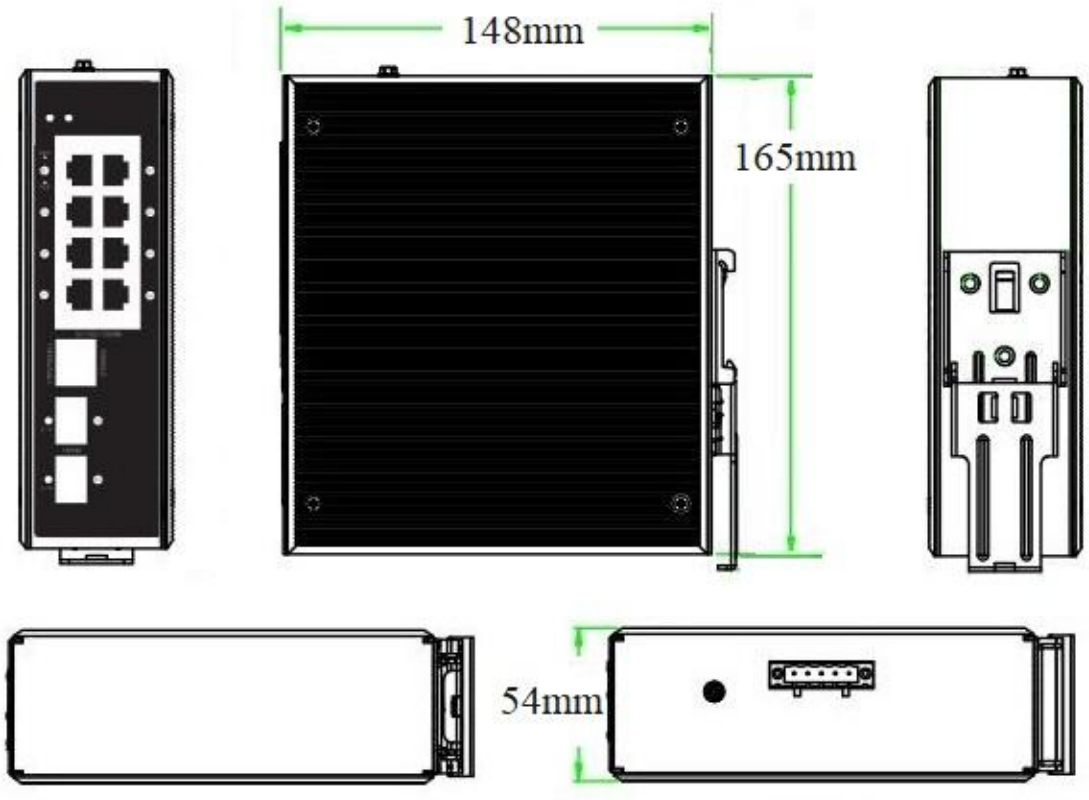
Forwarding Rate@64byte	14.88Mpps
CPU	416MHz
DRAM	1G
FLASH	128M
MAC	8K
Buffer Memory	4M
Jumbo Frame	9.6K
LED Indicator	Fiber port: L/A (Green), PoE: PoE (Green), Power: PWR (Yellow), System: SYS (Yellow), Network: Link (Yellow)
Reset Switch	Yes, Press and hold for 10 seconds and release, the switch will restore the factory settings
PoE& Power Supply	
PoE Port	Port 1-8
PoE Management	PoE power supply total power limit configuration Power delay start, PoE work and time scheduling Port PoE working status display, Port PoE output priority configuration Port PoE output power distribution, PoE on/off, af/at/bt power distribution
Power Supply Pin	1/2(+)3/6 (-) 4/5(+)7/8 (-)
Max Power Per Port	90W, IEEE 802.3 af/at/bt
Power Consumption	Standby<8W, Full load<480W
Input Voltage/ Interface	DC48-57V, 6P industrial Phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/480W industrial power supply
Physical Parameter	
Operation Temp/ Humidity	-40~+80°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40~+85°C, 5%~95% RH Non condensing
Dimension(L*W*H)	165*148*54mm
Net /Gross Weight	0.95kg/ 1.2kg
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	5 years, lifelong maintenance.
Network Management Feature	
Interface	Port temperature protection setting IEEE802.3x flow control (Full duplex) Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port, mini particle size is 64Kbps.
L3 Feature	ARP protocol max 1024 entries Static routing/ default routing max 128 entries L2+ network management, IPV4/IPV6 dual stack management L3 routing and forwarding, and communication between different network segments and different VLAN

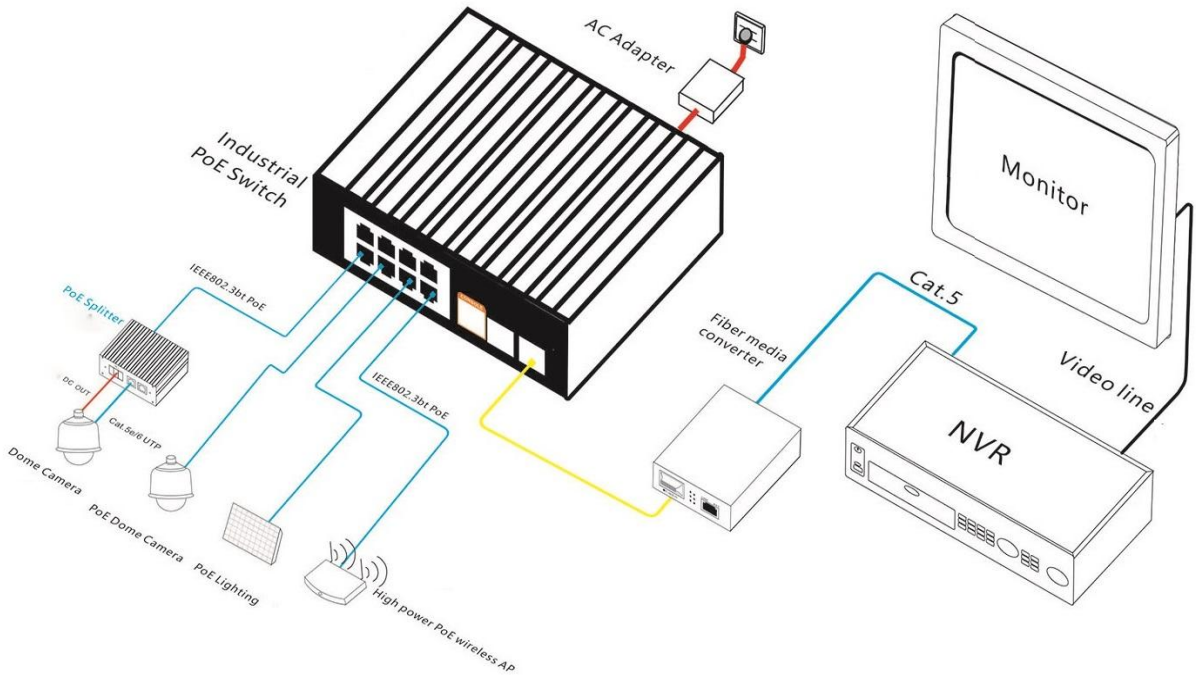
VLAN	Access, Trunk, and Hybrid port configurations Port-based VLAN (4K), IEEE802.1q, QinQ configuration Voice VLAN, Protocol-based VLAN, MAC address-based VLAN
Port Aggregation	LACP, Static aggregation, Max 5 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Ring Network Protocol	G.8032 (ERPS), 250 Ring at most, Max 250 devices per ring. Recovery time less than 20ms
Multicast	MLD Snooping, Multicast VLAN, IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
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 distribution based on port and VLAN L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.
Security	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 Anti-DoS attack, AAA & RADIUS & TACACS+ certification IP-MAC-VLAN-Port binding, ARP inspection, MAC learning limit
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	NTP clock, One click restore, SNMP V1/V2/V3

	System work log, Web network management (https) Ping detection, Link Layer Discovery Protocol (LLDP) ONV-NMS platform cluster management (LLDP+SNMP) Cable status check, Viewing CPU Instant Utilization Status Console/ AUX Modem/ Telnet/ CLI command line configuration FTP, TFTP, Xmodem, SFTP file upload and download management
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

DIMENSION



APPLICATION



ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33108PFM-bt	L2+ managed industrial bt PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.	480W
Note: The optical module and power supply are not included and need to be purchased.		

PACKING LIST

	Content	Qty	Unit
Packing List	10-port Gigabit managed industrial bt PoE switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC

OPTICAL MODULE

Product	Model	Description	Unit
1.25G Optical Module	2630-G	Industrial SFP optical module, 1.25G multi-mode dual fiber 850nm, transmission distance: 550m, LC interface. supports DDM function and hot plugging.	PC
	2632-G	Industrial SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2613-R-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T-G-SC	Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC
	2613-R-G-SC	Industrial SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC

Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

POWER SUPPLY

Product	Model	Description	Unit
480W DIN Rail Industrial Power Supply	GWS-DP480-48	DIN Rail 480W single set of output power supply Input Voltage: AC100V-240V 50-60Hz, 5.0A Output Voltage: DC48V, 10A Operation Temperature: -40℃ to +70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS31004PF-bt	Unmanaged industrial bt PoE switch with 4*10/100M RJ45 ports and 1*155M uplink SC fiber port. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.
ONV-IPS31064P-bt	Unmanaged industrial bt PoE switch with 6*10/100M RJ45 ports. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.
ONV-IPS33064P-bt	Unmanaged industrial bt PoE switch with 6*10/100/1000M RJ45 ports. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.
ONV-IPS33064PF-bt	Unmanaged industrial bt PoE switch with 4*10/100/1000M RJ45 ports and 2*1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input

	(Phoenix terminal connection) and DIN rail mounting.
ONV-IPS33064PFG-bt	Unmanaged industrial bt PoE switch with 5*10/100/1000M RJ45 ports and 1*1000M uplink SFP fiber port. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.
ONV-IPS33064PFM-bt	L2+ managed industrial bt PoE switch with 4*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.
ONV-IPS57128PFM-bt	L2+ managed industrial bt PoE fiber switch with 8*10/100/1000/2500M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port 1-8 can support IEEE 802.3 af/at/bt PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting.

CONTACT US

Optical Network Video Technologies (Shenzhen) Co., Ltd.

Tel: 0086-755-33376606

Fax: 0086-755-33376608

WeChat: ONV-PoE-IoT

Email: onv@onv.com.cn

Skype: onv@onv.com.cn

Website: www.onvcom.com

Headquarter Address: Room 1003, Block D, Terra Building, Futian District, Shenzhen

Factory Address: Building B3, Galaxy Artificial Intelligence Industrial Park, No. 333, Zhongkai 6th Road, Chenjiang Street, Zhongkai High-tech Zone, Huizhou