Product Datasheet

52-port 10G Uplink Managed Industrial PoE Switch

(ONV-IPS56052PFM)

OVERVIEW

The ONV-IPS56052PFM is a 10G uplink managed industrial PoE switch independently developed by ONV. It has 48*10/100/1000Base-T adaptive RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-48 can support IEEE802.3af/at PoE standard. Single-port PoE power reaches 30W. As a PoE power supply device, it can automatically detect and recognize power-compliant devices that meet the standard and supply power through the network cable. It can supply power to POE terminal equipment such as wireless AP, webcam, VoIP, industrial sensor through the network cable, and meet the network environment that needs high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, industrial scenes such as shipping, metallurgy, and green energy construction form a cost-effective, stable and reliable communication network.

ONV-IPS56052PFM has L2+ full network management function, supports IPV4/ IPV6 management, static route full wire-speed forwarding, complete security protection mechanism, complete ACL/QoS policy and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms)

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.

and (ITU-T G.8032) ERPS(<20ms) 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 needs, port management, routing address management, port flow control, VLAN division, IGMP, security policy and other application services are configured through network management methods such as Web, CLI, SNMP, Telnet, etc.

FEATURE

■ **Gigabit access, 10G uplink**

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◇ Support Gigabit Ethernet port and 10G SFP+ uplink port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Intelligent PoE power supply function**

◇ 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.

◇ 48*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

◇ 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.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation, storm control.

◇ IP-MAC-VLAN-Port binding.

■ **Strong business processing capability**

◇ ERPS/STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

◇ IGMP V1/V2 and IGMP Snooping.

◇ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, 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.

■ **Stable and reliable**

◇ CCC,CE, FCC, RoHS.

◇ Low power consumption, galvanized steel casing. The fan active cooling.

◇ The user-friendly panel can show the device status through the LED indicator of PWR, Link, L/A, PoE.

◇ Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.

■ **Easy operation and maintenance 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

+86 755 33376606 ONV
Optical Network Video Technologies (Shenzhen) Co., Ltd.

Model	ONV-IPS56052PFM
Interface Characteristics	
Fixed Port	2*AC100-240V input ports Alarm switch port (FAULT) 1*Console port (115200, N, 8,1) 4*1/10G uplink SFP+ ports (Data) 48*10/100/1000Base-T PoE ports (Data/Power) 1 group of DC48-57V input ports (Support reverse polarity protection function)
Ethernet Port	Port 1-48 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/6 or later UTP(≤100 meters)
Optical Fiber Port	Gigabit SFP optical fiber port and 10G SFP+ optical fiber port, default no include optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Fiber Port Expansion	Support Turbo overclocking 2.5G optical module expansion and ring network
Optical Cable/ Distance	Multi-mode: 850nm / 0-500M(1G), 850nm /0-300M(10G), Single-mode: 1310nm / 0-40KM, 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-T, IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-LR/SR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	368Gbps (non-blocking)

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.

|	
Forwarding Rate@64byte	131Mpps
CPU	Dual core 1GHz
DRAM	2GB
FLASH	256MB
MAC	32K
Buffer Memory	16MB
Jumbo Frame	12KB
LED Indicator	Power: PWR(Green), System: SYS (Green), Network:Link (Yellow), PoE: PoE (Green), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
PoE & Power Supply	
PoE Port	Port 1 to 48 IEEE802.3af/at
PoE Management	PoE working status display, Port PoE on/off, af/at power distribution
Power Supply Pin	1/2 (+) 3/6(-)
Max Power Per Port	30W, IEEE802.3af/at
Total PWR / Input Voltage	2*600W(AC100-240V)
Power Consumption	Standby<35W, Full Load<600W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 6.6A*2
Power Input Port	1 group of DC48-57V input port Alarm switch port, 1 group of AC power input ports Dual input power port design: AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection.
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)	440*378*44.5mm
Net /Gross Weight	<6.8kg / <7.5kg
Installation	Desktop, 19 inch 1U cabinet

Certification & Warranty

Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP30
	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 EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.

Network Management Features

Interface	IEEE802.3x flow control (full duplex)
	Port exception protection mechanism

	Port real-time flow management (Flow Interval)
	Broadcast storm suppression based on port rate
	Optical port SFP module DDMI real-time digital diagnosis
	Limit the rate of incoming and outgoing packet traffic, with a minimum granularity of 16Kbps and a maximum of 1Gbps
	Port EEE Green Ethernet Energy-Saving configuration and status view
	Jumbo frame configuration, the largest 12000byte
Layer 3 Features	OSPFv1/v2, OSPFv3, Static routing, RIPv1/v2, RIPng
	The maximum number of ARP protocol entries is 1024
	L2+ network management function, Dual stack IPv4/IPv6 management
VLAN	VLAN based on MAC, VLAN based on the protocol
	Port configuration of Access, Trunk, Hybrid. GVRP VLAN protocol
	(4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
Port Aggregation	LACP dynamic aggregation, Static aggregation
	Max 26 aggregation groups and maximum 8 ports per group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding
	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	Support ERPS ring network, ring network self-healing time is less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, IGMP Snooping, Multicast VLAN
	User quick log out, MVR (Multicast LAN registration)
	IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports
	Supports 1-to-multiple mirroring, supports up to 4 port sessions
QoS	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
	Flow-based Rate Limiting, Stream based redirection
	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

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.

|	
	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	Port based IEEE802.1X authentication SSL guarantees data transmission security Quad binding function of IP+MAC+VLAN+ports MAC address learning limit, MAC address black hole Anti DoS attack, Port broadcast message suppression IP Source Guard function, AAA&RADIUS certification Hierarchical user management and password protection SSH 2.0 provides a secure encrypted channel for user login Host data backup mechanism, ARP intrusion detection function Port isolation, IP Source Guard, ARP message speed limit function
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https) Link Layer Discovery Protocol(LLDP) Viewing CPU Instant Utilization Status NTP clock, One click restore, SNMP V1/V2C/V3 Cable status check, Ping detection, System work log ONV NMS platform cluster management (LLDP+SNMP) Console/AUX Modem/Telnet/CLI command line configuration FTP, TFTP, Xmodem, SFTP file upload and download management
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

DIMENSION
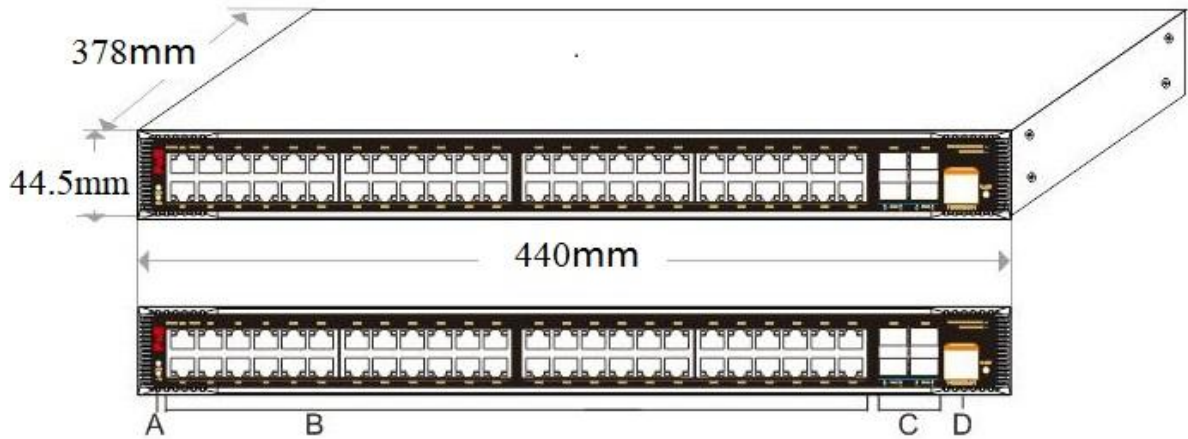
A. Working indicator

B. 48*10/100/1000M PoE ports

C. 4*1/10G SFP+ ports

D. Console port

APPLICATION
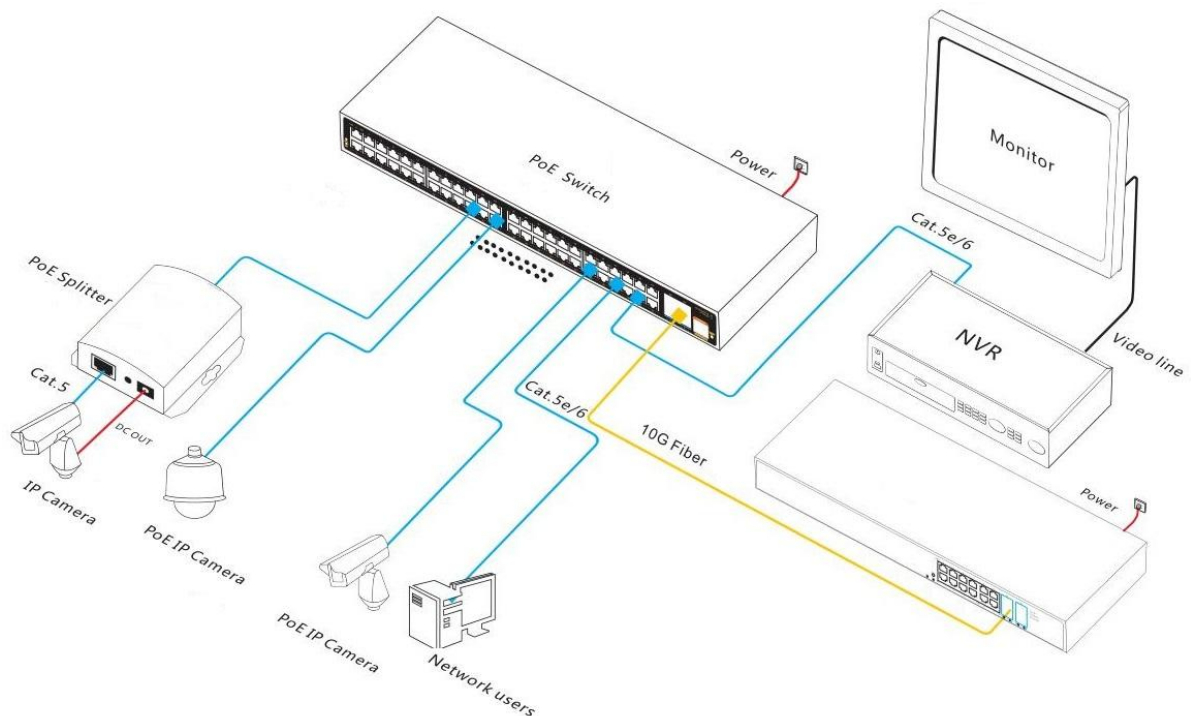
ORDERING INFORMATION

Model	Description	Configure Power Supply
ONV-IPS56052PFM	L2+ managed industrial PoE fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ ports. Port 1-48 support IEEE802.3af/at PoE standard. Built-in redundant dual power supply. support 1U/19-inch cabinet installation.	2*600W

Note: The SFP optical module is not included by default and needs to be purchased separately.

PACKING LIST

	Content	Qty	Unit
Packing List	52-port 10G uplink managed industrial PoE fiber switch	1	SET
	RJ45-DB9 Line	1	PC
	AC Power Cable	1	PC
	Mounting Kits (Hanging Ear)	1	SET
	User Guide	1	PC
	Warranty Card	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, support DDM function, support hot plug and pull.	PC
	2632-G	Industrial SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

11	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
	2612-T-G-SC	Industrial SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
	2613-R-G-SC	Industrial SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
10G Optical Module	6630-G	Industrial SFP+ optical module, 10G, multi-mode dual fiber 850nm, transmission distance: 300m, LC interface, support DDM function,support hot plug and pull.	PC
	7832-G	Industrial SFP+ optical module, 10G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-33-G	Industrial SFP+ optical module, 10G, single-mode single fiber TX1330nm/RX1270nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-27-G	Industrial SFP+ optical module, 10G, single-mode single fiber TX1270nm/RX13300nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

RELATED PRODUCT

Model	Description

ONV-IPS56028FM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ ports. Port 1-24 support IEEE802.3af/at PoE standard. It support 2AC+DC redundant power terminal input and 1U/19-inch cabinet installation.
ONV-IPS56036FM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP combo ports and 4*1/10G SFP+ ports. Port 1-24 support IEEE802.3af/at PoE standard. It support 2AC+DC redundant power terminal input and 1U/19-inch cabinet installation.

CONTACT US

ONV 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, China

Factory Address: The 4-6th Floor, No. 59, Huaning Road, Xinwei Community, Dalang Street, Longhua District, Shenzhen, China