Product Datasheet

20-port Full Gigabit Managed PoE Switch

ITM-POE33020PFM

OVERVIEW

The ITM-POE33020PFM series is a gigabit L2+ managed PoE fiber switch. It has 16*10/100/1000Base-T RJ45 ports and 4*100/1000Base-X SFP fiber slot ports. Port 1-16 can support IEEE 802.3af/at standard PoE power supply. single port PoE power reaches 30W, and the maximum PoE output power is 250W (at-400W). 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 can supply power to POE terminal equipment such as wireless AP, webcam, VoIP phone, building visual access control intercom through network cable, to meet the network environment that needs high-density PoE power supply, suitable for hotels, campuses, parks, supermarkets, scenic spots, Factory quarters and SMB small and medium-sized enterprises form a cost-effective network.

The ITM-POE33020PFM has the L2+ full network management, support IPV4/IPV6 management, static route full line rate forwarding, 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) and (ITU-T G.8032) ERPS 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, Gigabit SFP fiber port uplink**

◇ All series 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.

■ **Intelligent PoE power supply**

◇ 16*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

◇ IEEE 802.3af/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.

■ **Strong business processing capability**

◇ 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.

◇ IGMP V1/V2 and IGMP Snooping.

◇ ERPS/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, galvanized steel casing, The fan active cooling.

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

◇ CCC,CE, FCC, RoHS.

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

■ **Easy operation and maintenance 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

Model	ITM-POE33020PFM	ITM-POE33020PFM-at
Interface Characteristics		
Fixed Port	16*10/100/1000Base-T PoE ports (Data/Power) 4*100/1000Base-X uplink SFP slot ports (Data) 1 * RS232 console port(115200,N,8,1)	
Ethernet Port	Port1-16 can support 10/100/1000Base-T(X) 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, 1550nm 0 ~ 120KM.
Chip Parameter	
Network Management Type	L2+
Network Protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX/FX; IEEE802.3ab 1000Base-TX IEEE802.3z 1000Base-X IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	192Gbps
Forwarding Rate@64byte	29.76Mpps
MAC	8K
Buffer Memory	4.1M
Jumbo Frame	10K
LED Indicator	Power:PWR (yellow), system :SYS (yellow), network: Link/Act(yellow), POE: PoE (green), ,Fiber port: L/A(green)
Reset Switch	Yes, One-button factory reset
PoE & Power	
PoE Port	Port 1 to 16 IEEE802.3af/at @ POE

PoE Management	Total power limit of PoE power supply	
	PoE output power allocation, off& af &at	
	PoE output priority configuration	
	PoE working status	
	Delay start of power supply	
	Scheduling of PoE operation and time	
Power Supply Pin	Defaul 1/2 (+), 3/6 (-)	
Max Power Per Port	30W; IEEE802.3af/at	
Total PWR / Input Voltage	250W (AC100-240V)	400W (AC100-240V)
Power Consumption	Standby<16W, Full load<240W	Standby<18W, Full load<380W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 4.1A	Built-in power supply, AC 100~240V 50-60Hz 5.0A
Physical Parameter		
Operation TEMP / Humidity	-20~+55°C;5%~90% RH Non condensing	
Storage TEMP / Humidity	-40~+75°C;5%~95% RH Non condensing	
Dimension (L*W*H)	440*290*44.5mm	
Net /Gross Weight	<4.0kg / <4.5kg	<4.2kg / <4.7kg
Installation	Desktop, 19 inch 1U cabinet	
Certification & Warranty		
Lightning protection / protection level	Lightning protection: 6KV 8/20us; Protection level: IP30	
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS;	
Warranty	3 years , lifelong maintenance.	
Network Management Features		
Interface	IEEE802.3X (Full-duplex)	

	Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps. Port temperature protection setting Port green Ethernet Energy-saving setting
Layer 3 Features	L2+ Network management IPV4/IPV6 management L3 soft routing forwarding, 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 Voice VLAN, QinQ configuration Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP, Static aggregation Max 10 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Multicast	IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out MLD Snooping v1/v2,Multicast VLAN
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS,Priority Mark/Remark 8*Output queues of each port 802.1p/DSCP priority mapping Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based Packet Filtering Flow-based Redirection Flow-based Rate Limiting
ACL	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. Port-based Issuing ACL. ACL based on port and VLAN
Security	User hierarchical management and password protection SSH 2.0,SSL,Port isolation,ARP message speed limit Broadcast storm control,Backup for host datum IEEE802.1X & MAC address authentication Mac black holes,IP source protection AAA & RADIUS,MAC learning limit ARP inspection,Anti-DoS attack IP-MAC-VLAN-Port binding
DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	Console/AUX Modem/Telnet/SSH2.0 CLI Web Management (HTTPS) Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3 One-key recovery NTP,System work log,Ping Test Cable Diagnose,LLDP CPU instant utilization status view NMS - Smart Network Management System Platform (LLDP+SNMP)
System	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; Category 5 Ethernet network cable 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

290mm

44.5mm

440mm

A   B   C   D E

ACIN 100-240V   F
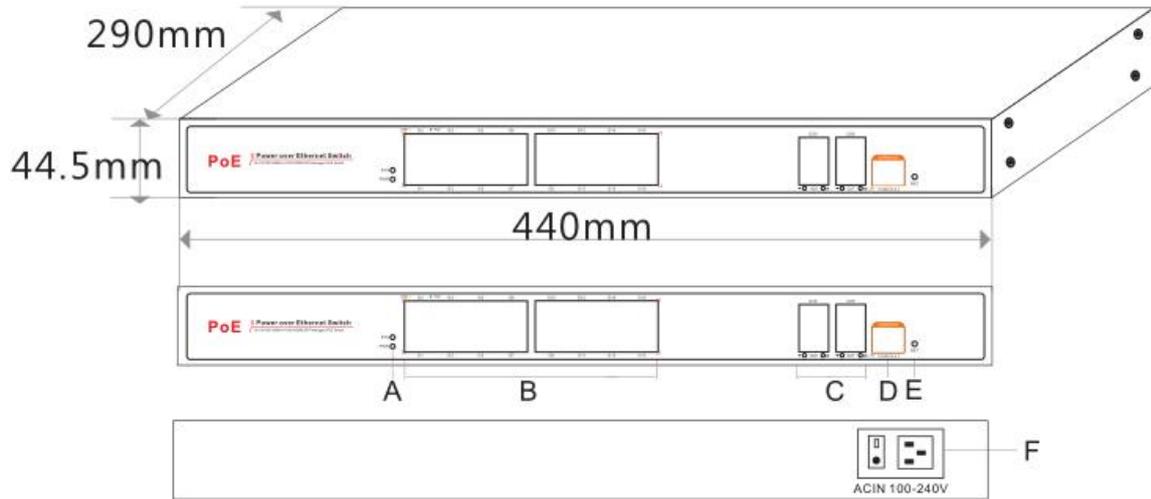
A. Working indicator
B. 16* PoE ports
C. 4*Gigabit SFP ports
D. Console port
E. Reset switch
F. Power Input Port AC100-240V,50/60Hz

APPLICATION
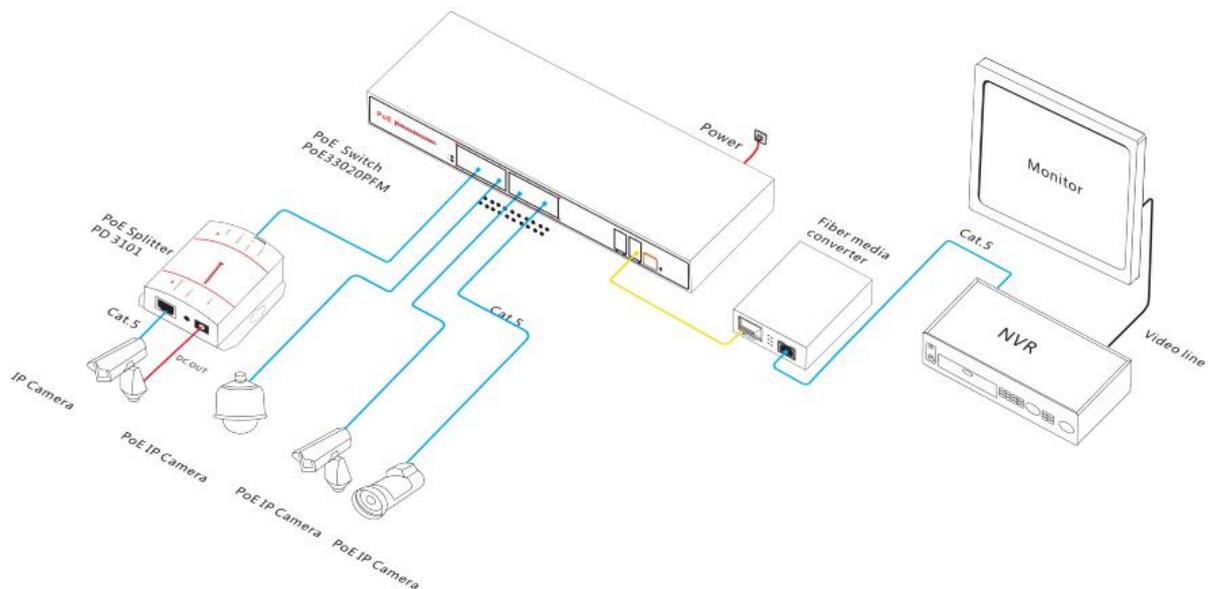
PACKING LIST

	CONTENT	QTY	UNIT
PACKING LIST	20-port full gigabit managed PoE 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

ORDERING INFORMATION

Model	Description
ITM-POE33020PFM	L2+ managed PoE fiber switch with 16* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports , Port 1-16 can support IEEE 802.3af/at PoE standard, Built-in 250W power supply.
ITM-POE33020PFM-at	L2+ managed PoE fiber switch with 16* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports , Port 1-16 can support IEEE 802.3af/at PoE standard, Built-in 400W power supply.
Note: PoE switch does not match the SFP module.	

OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Fiber Module	2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM, hot plug and pull.	PC
	2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM, hot plug and pull.	PC
	2612-T	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM, hot plug and pull.	PC
	2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM, hot plug and pull.	PC
	2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM, hot plug and pull.	PC
	2613-R-SC	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface, support DDM, hot plug and pull.	PC
Electric Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 net port.	PC

RELATED PRODUCT

Model	Description
ITM-POE33148PFM	L2+ managed PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*10/1000M SFP slot ports, Port 1-8 can support IEEE802.3af/at PoE. Built-in 130W power supply.
ITM-POE33010PFM	L2+ managed PoE fiber switch with 8*10/100/1000M RJ45 ports and and 4*10/1000M SFP slot ports, Port 1-8 can support IEEE802.3af/at PoE. Built-in 130W power supply.
ITM-POE33026PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports (2* combo ports), Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.
ITM-POE33028PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports, Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.
ITM-POE36036PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.