

16+2F Fully Gigabit Network Managed POE switch



16 10/100/1000M POE network



2 100/1000M uplink SFP optical port slots



1 Console management port

IPM-MANAGER-1600S



Specifications

Exchange

Packet forwarding

MAC address:8K

Jumbo

Network management

Input voltage:AC100-240V 50/60Hz, 300W

Dimensions:440*190*45mm

weight:2.5kg

【Product Description】

IPM-MANAGER-1600SseriesFull Gigabit Layer 2 managed PoE switch, have16individalthousandmeganeatmouth+2 Gigabit uplink SFP optical port slots, among which 1-16The port supports IEEE 802.3af/at standard PoE power supply, and the single-port PoE power reaches 30W. IPM-MANAGER-1600S All service ports support 4KV electrostatic lightning protection. As a PoE power supply device, it can automatically detect and identify powered devices that meet standards and power them through network cables. It can supply power to POE terminal equipment such as wireless AP, network camera, Internet phone, building visual access control intercom, etc. through the network cable. It meets the network environment that requires a high-density PoE power supply and is suitable for hotels, campuses, parks, supermarkets, banks, scenic spots, factory dormitories, and SMB small and medium-sized enterprises to build cost-effective networks.

IPM-MANAGER-1600S has L2+ network management functions, supports IPV4

static route forwarding, supports complete security protection mechanisms, complete ACL/QoS policies, and rich VLAN functions, making it easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and ERPS (<20ms) ring network protocols to improve link backup and network reliability. When a one-way network fails, communications can be quickly restored to ensure important Transmission of uninterrupted communications. According to actual application needs, PoE power supply management, port flow control, VLAN division, QoS, LACP, IGMP and DHCP and other application service configurations are performed through network management methods such as Web, CLI, SNMP, and Telnet.

【Product Features】

- Single-port PoE power up to 30W, af/at adaptive, widely compatible with various network terminals, supports PoE network management, remote POE port restart, and real-time power status viewing.
- Dual optical port uplink port, Optical fiber long-distance transmission, adapt to various Ring network/chain network cascading and expansion make networking easier;
- Full Gigabit high-speed transmission, high-bandwidth transmission is stable and guaranteed, supports per-port rate and flow control, and achieves 10M/250 meters long-distance transmission, easily solving long-distance communication and power supply problems, to meet different user needs.
- Enterprise-level high-bandwidth switching chips, high backplane, and large cache, reduce network congestion.
- Supports automatic learning and updating of MAC addresses, and automatic port flip (Auto MDI/MDI-X) function.
- The service port supports 4KV anti-surge (lightning protection) protection, PoE short circuit and overload protection, making it safer and more secure to use.
- Fine steel forged metal shell, shielding interference, strong heat dissipation, strong, rust-proof and more durable.

【Software Features】

Strong business capabilities

- Supports 128 entries of IPV4 static routing and ARP protocol, with a maximum of 1024 entries.
- Flexible port bandwidth and traffic configuration, optical port DDMI digital diagnostic function, easily achieve refined network management.
- Supports IEEE 802.1Q VLAN, protocol VLAN, and QinQ VLAN. Users can flexibly divide VLANs according to needs.
- Supports QoS, three priority modes based on port, 802.1P-based and DSCP-based, and four queue scheduling algorithms: Equ, SP, WRR and SP+WRR.
- Supports ACL to filter data packets by configuring matching rules, processing operations, and time permissions to provide flexible security access control strategies.
- Supports IGMP V1/V2 multicast protocol and IGMP SnoopingV1/V2/V3 to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.
- Supports STP/RSTP/MSTP production tree protocol and ERPS fast ring network protocol to eliminate layer 2 loops and achieve link backup.
- Supports static aggregation and dynamic aggregation (LACP), effectively increasing link bandwidth, achieving load balancing, link backup, and improving link reliability.

Complete Security Features

- Support WEB interface user authentication
- Supports CPU protection to prevent attacks by large data flows on the switch itself
- Support 802.1x authentication, Remote RADIUS, TACACS+ authentication
- Hardware supports IP ACL,MAC ACL, ACLPort filtering Function, MAC address binding, Port-based IP+MAC+Vlan+Port multiple binding function.
- Supports DHCP Snoopingv1/v2/v3 function, port isolation function, and port broadcast storm suppression function.

Convenient Operation and Maintenance Management

- Supports diverse management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2c/V3), etc.
- Supports HTTP/HTTPS, SSH and other encryption methods, making management more secure.
- Supports HTTP/TFTP for firmware update/upgrade, supports configuration file upload/download, and restores system configuration with one click.
- Supports RMON, system logs, and port traffic statistics to facilitate network optimization

and transformation.

- Supports LLDP, which facilitates the network management system to query and determine the communication status of the link.
- Supports CPU monitoring, memory monitoring, Ping detection, and cable detection.

【Technical Specifications】

model		IPM-MANAGER-1600S
Port characteristics		
fixed port	Downstream port	16 10/100/1000Base-T RJ45 network ports
	Upstream port	2 100/1000M SFP optical port slots
	Management port	1 Console port (115200, 8, N, 1)
	PoE port	1-16 supports af/at standard PoE power supply, transmission distance 100-250 meters
Network port characteristics		1-16 mouths 10/100/1000M adaptive, full/half duplex MDI/MDI-X Adaptive
twisted pair transmission		10BASE-T: Cat3, 4, 5 UTP (≤250 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
Optical port characteristics		Gigabit SFP Optical fiber interface is not equipped with optical modules by default and needs to be purchased separately (optional order mode/multi-mode, single fiber/double fiber optical modules, LC/SC)
Optical cable		Multimode: 850nm/0~550M, 50 μm/125 μm & 62.5 μm/125 μm Single mode: 1310nm/0~40KM, 1550nm/0~120KM. 9.5 μm/125 μm
Exchange chip parameters		
Network management type		L2+ network management
Network protocol		IEEE802.3 10BASE-T; IEEE802.3i 10Base-T IEEE802.3u 100Base-TX IEEE802.3x Flow Control IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE 802.3ad port trunk with LACP IEEE 802.1D Spanning Tree protocol IEEE 802.1w Rapid Spanning Tree protocol IEEE 802.1s Multiple Spanning Tree protocol IEEE 802.1p Class of service

	IEEE 802.1Q VLAN tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3af DTE Power via MDI IEEE 802.3at DTE Power via MDI
CPU	500MHz
DRAM	1Gbits
FLASH	256Mbits
Forwarding mode	Store and forward (full line speed)
Backplane bandwidth	32Gbps (non-blocking)
Packet forwarding rate@64byte	26.78Mpps
MAC address table	8K
Packet forwarding cache	4.1Mbits
jumbo frame	10Kbytes
indicator light	Power Indicator:PWR (Green); System running light: SYS (green); Network indicator: L/A (green), PoE indicator: PoE (yellow); Optical port indicator: SFP (green)
onekey reset switch	1, long press and release for 6 seconds to restore factory settings
MTBF	100,000 hours
POE and power characteristics	
POE port	Ports 1-16 support IEEE802.3af/at standard POE power supply
PoE management	Supports PoE on/off and restart for each port, PoE working status display for each port, real-time PoE power display
Power supply pin	Default 1/2(+), 3/6(-) 4-core power supply
Maximum PoE power of single port	30W, standard IEEE802.3af/at
Total power/input voltage	300W (AC100-240V)
Machine power consumption	Standby power consumption: <15W; full load power consumption: <300W
Supporting power supply	Built-in AC switching power supply AC: 100~240V 50-60Hz 4.0A
Physical specifications	
Operating temperature/humidity	-20° C~+55° C; 5%~90% RH non-condensing
Storage	-40° C~+75° C; 5%~95% RH non-condensing

temperature/humidity	
Appearance size (L*W*H)	440*190*45mm
Net weight/gross weight	<2.5kg / <3.0kg
Installation method	Desktop, rack mount
Certification and Warranty	
Lightning protection/protection level	Port lightning protection: 4KV 8/20us; protection level: IP30
Safety certification	CE, FCC, RoHS, CCC
Warranty	2 years
Software management features	
port	Support IEEE802.3x flow control (full duplex), half-duplex back pressure flow control Supports forced port mode and rate Support broadcast storm and port storm inhibition Supports port traffic rate limiting with a minimum granularity of 16Kbps, up to 1Gbps Support port real-time traffic management (Flow Interval) Supports jumbo frame size control, supporting up to 16K data packets Support optical port DDMI digital diagnostic function
IP routing	Support L2+ network management function, Supports IPV4 static routing/default routing, maximum entries 128 Supports ARP protocol, maximum entries 1024
VLAN	Support port-based VLAN (4K), IEEE802.1q VLAN Supports protocol-based VLANs Supports three types of port configuration: Access, Trunk, and Hybrid
Port aggregation	Support static aggregation Supports dynamic aggregation (LACP) Support maximum 9 Aggregation group, each aggregation group supports up to 8 ports
Ring network function	Support loop protection function Support STP/RSTP/MSTP spanning tree protocol Supports ERPS ring network (single ring, multi-ring, intersecting ring and tangent ring configuration), the ring network self-healing time is less than 20ms
multicast	Support IGMP Snooping v1/v2/v3, supports up to 1024 multicast group
mirror	Supports bidirectional traffic mirroring of basic ports
QoS	Supports priority based on port, 802.1P and DSCP/ToS, Supports 8 output queues per port Supports four priority scheduling modes: Equ, SP, WRR, and SP+WRR Support priority mark Mark/Remark

	Supports flow-based rate limiting, packet filtering, and redirection
ACL	Supports L2~L4 packet filtering function, which can match the first 80 bytes of the message and provide based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, and TCP/UDP port range , VLAN, etc. define ACL. Supports issuing ACL based on port and VLAN
security features	Support user hierarchical management and password protection Support port-based IEEE802.1X authentication Support AAA&RADIUS andTACACS+Certification Supports MAC address learning number limit Supports MAC address blackhole and address binding Support SSH 2.0, providing secure encrypted channel for user login Support port isolation Support ARP message rate limiting function Support IP source address protection Support ARP intrusion detection function Support anti-DoS attack Support port broadcast message suppression Support host data backup/restore mechanism IP+MAC+VLAN+portfour yuanBinding function
DHCP	Support DHCP Serve Support DHCP Client Support DHCP Snoopingv1/v2/v3
Management and maintenance	Supports diverse management and maintenance such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2c/V3), etc.Support WEB network management (supportHTTP/HTTPS) Support HTTP and TFTP file upload/download management Support RMON 1, 2, 3 and 9 groups Support one clickreset Support NTP clockand local clock supportlocal log andSystem log(SYSLOG) Support Ping detection Support cable status check Supports real-time CPU utilization status viewing Supports link layer discovery protocol LLDP Supports unified management of NMS platform clusters (LLDP+SNMP)
System Requirements	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher Category 5 and above Ethernet cables; TCP/IP network adapter and operating system (such as Microsoft Windows, Linux or Mac OS)