

# ET4220XM-S-PD

L2+ Managed 20-port 100/1000Base-FX SFP + 4-port 10/100/1000Base-TX or 100/1000Base-FX SFP Combo + 4-port 1000/10GBase-FX SFP Optical Ethernet Switch, AC + DC power inputs



## Features

- ▶ L2+ Managed features provide easier manageability, robust security and QoS
- ▶ STP/RSTP/MSTP
- ▶ IGMP v1, v2, v3 Snooping
- ▶ IEEE 802.3az EEE Energy Efficient Ethernet standard for green Ethernet
- ▶ Provide 20 100/1000Base-FX dual speed SFP slots
- ▶ Provide 4 10/100/1000Base-TX or 100/1000Base-FX dual speed SFP combo port
- ▶ Provide 4 1000/10GBase-FX dual speed SFP+ uplink slots
- ▶ Combo RJ45 Port Supports 10/100/1000Mbps-Full/Half-duplex, Auto-negotiation, Auto MDI/MDIX
- ▶ Supports 32K MAC address
- ▶ 19" 1U Rack-mount
- ▶ Web/CLI/SNMP (v1, v2c, v3) management interfaces
- ▶ Built-in AC and DC dual power supply
- ▶ Embedded Surveillance Device Management (Option by request)
- ▶ -20°C to 60°C (-4°F to 140°F) operating temperature

## Warranty

- ▶ 5-Year Warranty

## Specifications

### Ethernet

Standards	IEEE802.3 10Base-T IEEE802.3u 100Base-TX IEEE802.3u 100Base-FX IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-X
Processing Type	Store-and-Forward
Switch Fabric	128 Gbps
Forward Filter Rate	14,880pps (10Mbps) 148,800pps (100Mbps) 1,488,000pps (1000Mbps) 14,880,000pps (10Gbps)
Maximum Packet Length	10K Bytes
Address Table Size	32K MAC Address
Optical Port	20 x 100/1000Base-FX dual speed SFP 4 x 100/1000Base-FX SFP or 10/100/1000Base-TX RJ45 combo port 4 x 1000/10GBase-FX dual speed SFP
Console port	1 x DB9 for console

### Electrical and Mechanical

Input Power	AC: 100~240 VAC, 50/60 Hz DC: 24~72 VDC
Power Consumption	Max. 45W
LED Indicators	
Power	Power Status
Ethernet and Fiber (Per Port)	Link/Activity
Dimensions (W x D x H)	442 x 211 x 44 mm
Weight	3.1 Kg
Casing	Metal Case
Mounting Options	Rack Mount

## Specifications

### Software Features

#### Layer 2 Switching

Spanning Tree Protocol (STP)	Standard Spanning Tree 802.1d Rapid Spanning Tree (RSTP) 802.1w Multiple Spanning Tree (MSTP) 802.1s
Trunking	Link Aggregation Control Protocol (LACP) IEEE 802.3ad Up to 14 groups Up to 4 ports per group
VLAN	Supports up to 4K VLANs simultaneously (out of 4096 VLAN IDs) Port-based VLAN 802.1Q tag-based VLAN MAC-based VLAN Management VLAN Private VLAN Edge (PVE) Q-in-Q (double tag) VLAN Voice VLAN GARP VLAN Registration Protocol (GVRP)
DHCP Relay	Relay of DHCP traffic to DHCP server in different VLAN. Works with DHCP Option 82
IGMP v1/v2/v3 Snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters. Supports 1024 multicast groups
IGMP Querier	IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router
IGMP Proxy	IGMP snooping with proxy reporting or report suppression actively filters IGMP packets in order to reduce load on the multicast router
MLD v1/v2 Snooping	Delivers IPv6 multicast packets only to the required receivers
<b>Layer 3 Switching</b>	
IPv4 Static Routing	IPv4 Unicast: Static routing
IPv6 Static Routing	IPv6 Unicast: Static routing
<b>Security</b>	
Secure Shell (SSH)	SSH secures Telnet traffic in or out of the switch, SSH v1 and v2 are supported
Secure Sockets Layer (SSL)	SSL encrypts the http traffic, allowing advanced secure access to the browser-based management GUI in the switch
IEEE 802.1X	IEEE802.1X: RADIUS authentication, authorization and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions Supports IGMP-RADIUS based 802.1X Dynamic VLAN assignment
Layer 2 Isolation Private VLAN Edge	PVE (also known as protected ports) provides L2 isolation between clients in the same VLAN. Supports multiple uplinks
Port Security	Locks MAC addresses to ports, and limits the number of learned MAC address
IP Source Guard	Prevents illegal IP address from accessing to specific port in the switch
RADIUS/ TACACS+	Supports RADIUS and TACACS+ authentication. Switch as a client
Storm Control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
DHCP Snooping	A feature acts as a firewall between untrusted hosts and trusted DHCP servers
ACLs	Supports up to 512 entries. Drop or rate limitation based on: Source and destination MAC, VLAN ID or IP address, protocol, port, Differentiated services code point (DSCP) / IP precedence TCP/ UDP source and destination ports 802.1p priority Ethernet type Internet Control Message Protocol (ICMP) packets TCP flag
<b>Quality of Service</b>	
Hardware Queue	Supports 8 hardware queues
Scheduling	Strict priority and weighted round-robin (WRR) Queue assignment based on DSCP and class of service

## Specifications

Classification	Port based 802.1p VLAN priority based IPv4/IPv6 precedence / DSCP based Differentiated Services (DiffServ) Classification and re-marking ACLs
Rate Limiting	Ingress policer Egress shaping and rate control Per port
<b>Management</b>	
DHCP Server	Support DHCP server to assign IP to DHCP clients
Zero Touch Upgrade	Upgrade single switch automatically when you get notification
Remote Monitoring (RMON)	Embedded RMON agent supports RMON groups 1,2,3,9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring and analysis
Port Mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1 (N is Switch's Ports) ports can be mirrored to single destination port. A single session is supported.
UPnP	The Universal Plug and Play Forum, an industry group of companies working to enable device-to-device interoperability by promoting Universal Plug and Play
s-Flow	The industry standard for monitoring high speed switched networks. It gives complete visibility into the use of networks enabling performance optimization, accounting/billing for usage, and defense against security threats
IEEE 802.1ab (LLDP)	Used by network devices for advertising their identities, capabilities, and neighbors on an IEEE 802ab local area network Support LLDP-MED extensions
Web GUI Interface	Built-in switch configuration utility for browser-based device configuration
CLI	For users to configure/manage switches in command line modes
Dual Image	Independent primary and secondary images for backup while upgrading
SNMP	SNMP version 1, 2c and 3 with support for traps, and SNMP version 3 user-based security model (USM)
Firmware Upgrade	Web browser upgrade (HTTP/ HTTPS) and TFTP Upgrade through console port as well
NTP	Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched
Other Management	HTTP/HTTPS; SSH DHCP Client/ DHCPv6 Client Cable Diagnostics Ping Syslog Telnet Client IPv6 Management

### Environmental

Operating Temperature	-20°C to 60°C (-4°F to 140°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	10% to 90% non-condensing
MTBF	> 100,000 hrs

### Certification

CE, FCC Part 15 Class A, RoHS

## Ordering Information

Available Model	Description
ET42202XM-S-PD	L2+ Managed 20-port 100/1000Base-FX SFP + 4-port 10/100/1000Base-TX or 100/1000Base-FX SFP Combo + 4-port 1000/10GBase-FX SFP Optical Ethernet Switch, AC + DC power inputs

## Ordering Information

### Optional Accessories (to be purchased separately)

**SFP** (S) = SFP Option. Please select your SFP on our SFP Modules page at the back of the catalogue or our website [www.ot-systems.com](http://www.ot-systems.com) for details.

### Package Checklist

■ Managed Fiber Switch	x 1
■ Adhesive Rubber Feet	x 4
■ Mounting Accessory	x 1
■ AC Power Cord	x 1
■ RS232 DB9 to DB9 Cable	x 1

