

FOS-3128 Managed Gigabit Ethernet Switch



24 x 100/1000Mbps SFP slots + 4 x combo uplink ports (10/100/1000Mbps RJ-45 and 100/1000Mbps SFP slot) Managed Ethernet Access Switch

Features

- **IPv4/IPv6 Dual Stack**
Support IPv6 management, packet forwarding and MLD v1/v2 snooping
- **SFF-8472 Diagnostic Monitor Interface**
Allow administrator to view SFP information and status including speed, distance, vendor ID, vendor S/N, temperature, voltage, TX bias, etc.
- **Rich in functions to facilitate multimedia streaming**
Support IGMP snooping, IGMP fast leave, IGMP filtering to intelligently transmit multicast traffic and deliver IPTV service.
- **Q-in-Q VLAN Tagging**
Allow service providers to implement Metro Ethernet service while maintaining the layer-2 separating of different customers.
- **IEEE 802.3ad Link Aggregation**
A cost-efficient way to increase bandwidth and reliability by grouping multiple links into one.
- **Unique Power Down Trap Technology**
Built-in CTS unique SNMP power down trap function and detect network fault caused by power outage rapidly.
- **Power Supply Redundancy**
By combining two power sources (2AC or 2DC or 1AC+1DC), power redundancy can be well achieved..

Description

Connection Technology Systems (CTS) FOS-3128 is a layer 2 gigabit access switch equipped with 24 dual-speed SFP slots and 4 combo uplink ports (10/100/1000Mbps RJ-45 + 100/1000Mbps SFP slots). All SFP slots can accommodate wide range of SFP transceivers including single-mode, WDM or CWDM transceivers. FOS-3128 is perfect for service providers and enterprises who plan to implement FTTX or Metro Ethernet networks, with further spanning into triple-play service.

FOS-3128 delivers wire-speed throughput for data, voice and IPTV services, using non-blocking 56Gbps switching fabric. 1+1 power supply design can provide seamless power changeover to reach sustainability of power if one of the power supplies failed. AC and battery powers can be mixed in the same unit for deployment flexibility.

Many services providers are extending their existing data service with triple-play service because it generates higher revenue return by combining data, voice and IPTV in one box. Advanced features including IGMP snooping, IGMP fast leave, IGMP filtering, various QoS classifications and rate limit control facilitate service providers to deploy and manageable network environment and deliver a successful triple-play service.

In order to provide customers extra security and separation, FOS-3128 has come with Q-in-Q feature. This feature enables service providers to separate different customers at layer 2 level no matter what VLAN setting the end customer has.

With carrier-grade in mind while keeping user-friendly for administrators, FOS-3128 can be easily managed by web interface, console, telnet CLI, SNMP and DHCP auto-provision.

Target Applications

- **FTTX Metro Ethernet implementations.**

Specification

■Interface

- Combo Port (Type):
4 x 100/1000Mbps Combo (SFP + RJ45)
- SFP Slot (Type):
24 x 100/1000Mbps (SFP)
- Console Port (Type):
1 x RS-232 Port (RJ-45)

■Standards

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.3az EEE
- IEEE 802.3x Flow Control
- IEEE 802.3ad Link Aggregation (LACP)
- IEEE 802.1ab LLDP
- IEEE 802.1p Priority
- IEEE 802.1q Tag VLAN
- IEEE 802.1d STP
- IEEE 802.1w RSTP
- IEEE 802.1x Port based Network Access Control

■H/W Specification

- MAC Address table: 16K
- Non-Blocking Switching Fabric: 56Gbps
- Packet Buffer: 1536K Bytes
- Jumbo Frame: 9K Bytes
- Store and Forward Switching Mechanism
- Auto-Cross Over for MDI/MDIX in TP Ports
- Auto-Negotiation in TP Ports
- Full/Half Duplex Mode Operation

■LED

- Power A/B, COM, Status, Speed/Link/Act

■Forward / Filter Rate

- 10M : 14,880/14,880pps
- 100M : 148,800/148,800pps
- 1000M : 1,488,000/1,488,000pps

■Layer 2 Switch Features

VLAN

- IEEE 802.1q tag VLAN with P-bit Marking
- VLAN concurrent groups: 2K VLAN Groups
- Port Based VLAN
- VLAN Translation
- Q-in-Q Double tag with Configurable EtherType

QoS

- QoS 802.1p CoS / DSCP with Weighted Round-Robin(WRR) and Strict-Priority Queuing (SPQ) Scheduling Algorithm
- QoS Priority Queues: 8 Queues
- 802.1p P-bit & DSCP Remarking
- Port based rate limit (ingress/egress)

Network Redundancy

- STP IEEE 802.1d
- RSTP IEEE 802.1w
- Fast Network Recovery Protocol Ring Chain
Up to 200 nodes and recovery time < 50ms
- Link Aggregation (LACP)
- Static Port Trunking
- Up to 14 Aggregation Groups, 8 ports per Group

Multicast

- IGMP Snooping v1/v2/v3
- IGMP Fast Leave & Query
- MLD v1/v2 Snooping
- IP Multicast Filter with Segment & Profile
- Static Multicast Configuration

IPv6 Feature

- IPv6 over Ethernet (RFC 2464)
- IPv6 Addressing Architecture (RFC 4291)
- IPv6 Dual Stack (RFC4213)
- ICMPv6 (RFC4884)
- Path MTU Discovery for IPv6 (RFC 1981)
- Neighbor Discovery (RFC4861)
- DHCPv6 Client

Other Layer 2 Featres

- ACL Based on Physical port, EtherType, VID, TOS/DSCP, Protocol Type, L4 Port and IP
- Layer 2 Protocol Tunneling

■Security

- 802.1x Port Base Access Control
- 802.1x RADIUS Authentication
- 802.1x MAC Authentication Bypass*
- DHCP Option 82 Relay Agent
- DHCP Option 82 with configurable circuit & Remote ID
- DHCP Snooping and DHCP server trust port
- IP Source Guard
- Port Isolation

■Management

- SNMP v1,v2c,v3/HTTP/HTTPS/Telnet/SSHv2/CLI Interface
- Text Base CLI Configure file
- Port Configuration Speed/duplex/flow control/Description
- NTP with Daylight Saving Time
- Layer 2 Control Protocol filter
- Static MAC address Table
- Port Linkup Delay
- Port Link Flap
- Warm Reload
- MAC Limiters
- LLDP
- Storm Control (Unicast/Multicast/Broadcast)

■Maintenance

Diagnostic

- Port Mirror
- ICMP Ping
- Event log
- Syslog
- SFP SFF-8472 DDMI monitor
- SFP Port Threshold Alarm Notification
- Power Down Trap

Upgrade/Restore

- HTTP/FTP/TFTP Firmware & configuration update
- DHCP Auto-provision via DHCP option 60/43 for firmware and configuration upgrade

Other

- Loop Detection

■ Power Requirement

- Input AC: 100V ~ 240V 50/60Hz
- Input DC: 48VDC
- Power Consumption: 30W
- External Battery Charging Interface: 12VDC/24Ah

■ Environmental Condition

- Operation: 0°C ~ 50°C
- Storage: -20°C ~ 60°C
- Humidity: 5% ~ 90%, Non-condensing

■ Dimension & Weight

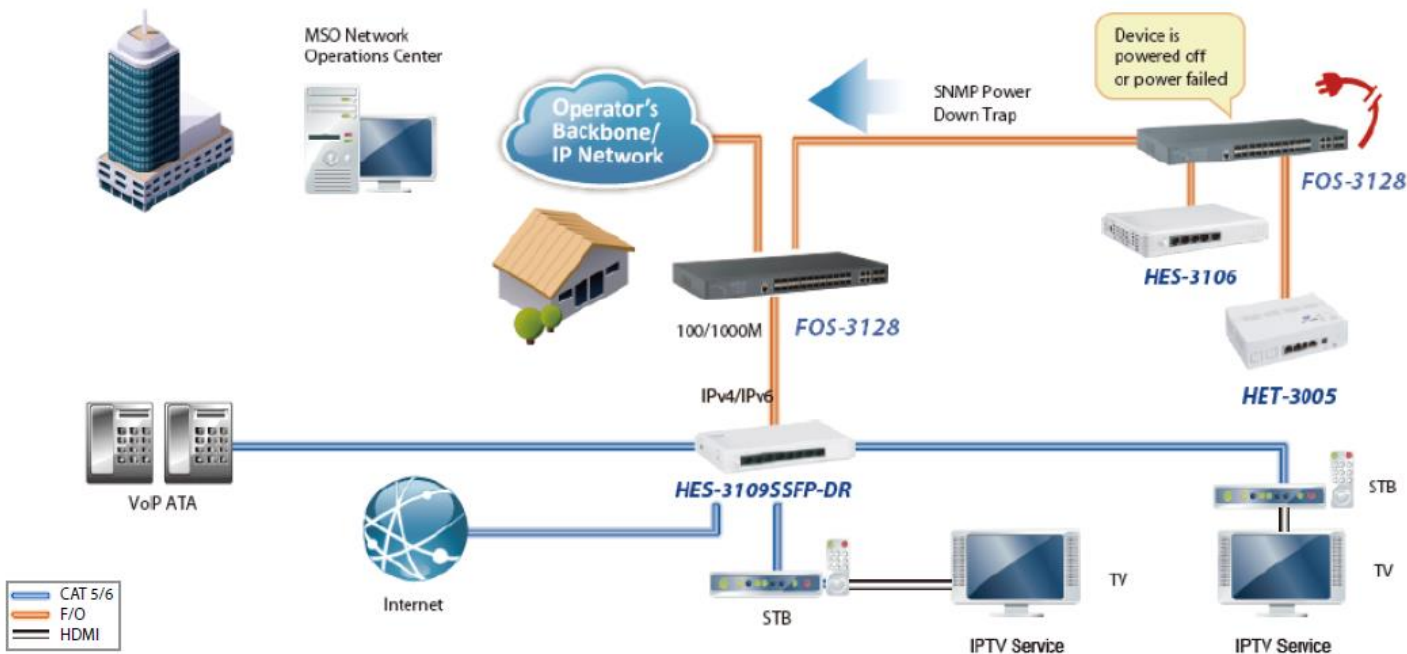
- Size: 440 x 205 x 44 mm (W x D x H)
- Weight: 3.04 Kg

■ EMC/Safety

- FCC Class A, CE

* Coming soon

Application Diagram



Order Information

FOS-3128

Model	Fiber Ports					TP Ports		Support Power Source
	Speed	Type	Connector	Distance	Ports	Speed	Ports	
FOS-3128-1A	100/1000 Mbps	SFP	-	-	28	10/100/1000 Mbps	4	Fixed 1 Internal AC
FOS-3128-2A	100/1000 Mbps	SFP	-	-	28	10/100/1000 Mbps	4	Fixed 2 Internal AC
FOS-3128-1D	100/1000 Mbps	SFP	-	-	28	10/100/1000 Mbps	4	Fixed 1 Internal DC
FOS-3128-2D	100/1000 Mbps	SFP	-	-	28	10/100/1000 Mbps	4	Fixed 2 Internal DC
FOS-3128-1AD	100/1000 Mbps	SFP	-	-	28	10/100/1000 Mbps	4	Fixed 1 Internal AC and 1 Internal DC