FOS-3148 Management Gigabit Ethernet Switch

44 ports 100/1000Mbps SFP + 4 Combo port 10/100/1000Mbps RJ-45 + 100/1000Mbps SFP slot Managed Ethernet Access Switch.

IPv6 | Dual rate fiber | Power down trap | SNMP | DHCP auto provision | Power Redundancy | Combo SFP/RJ-45 | Green

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 & advanced MVR** to intelligently transmit multicast traffic and deliver IPTV service.

▪ **Q-in-Q VLAN Tagging**
Allows service providers to implement Metro Ethernet service while maintaining the layer-2 seperation 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 can rapidly detect network fault caused by power outage.

▪ **Power supply redundancy**
By combining two power sources (2AC or 2DC or 1AC+1DC), power redundancy can be well achieved.

Target Applications
▪ FTTX Metro Ethernet implementations.

**Coming Soon.

Description

Connection Technology Systems (CTS) FOS-3148 is a layer2+ gigabit access switch equipped with 44 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-3148 is perfect for service providers and enterprises who plan to implement FTTX or Metro Ethernet networks, with further spanning into triple-play service.

FOS-3148 delivers wire-speed throughput for data, voice and IPTV services, using non-blocking 96Gbps switching fabric. 1+1 power supply design can provide seamless power changeover to reach sustainability of power if one of power supply has failure. AC and DC powers can be mixed in the same unit for deployment flexibility.

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

In order to provide customers extra security and separation, FOS-3148 has come with QinQ feature. This feature enables service providers to separate different customers at layer2 level no matter what VLAN setting the end customer has.

With carrier-grade in mind while keeping user-friendly for administrators, FOS-3148 can be easily managed by web interface, console, telnet CLI, SNMP and DHCP auto-provision.

Application Diagram
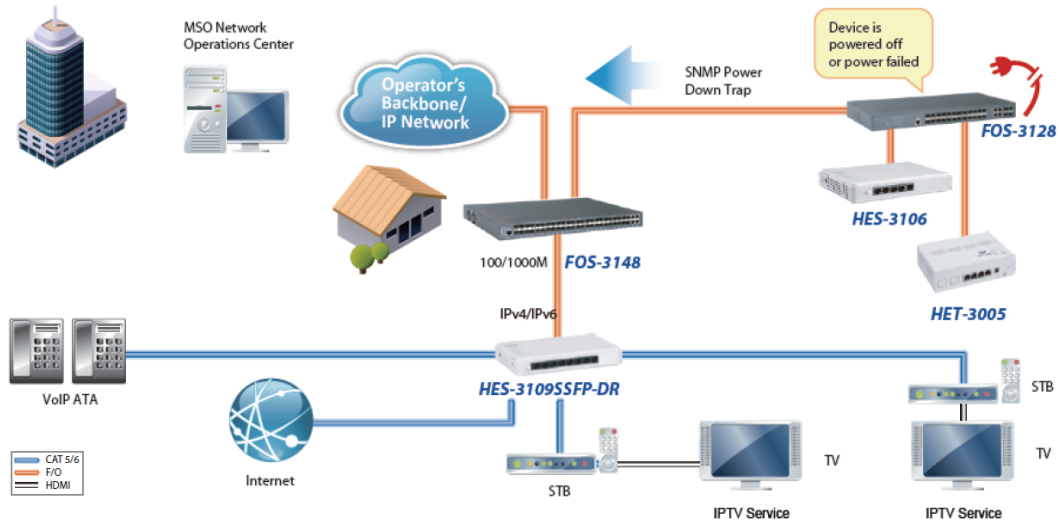
Specification

Interfaces
-Uplink Port (Type):
  4 x 100/1000Mbps Combo (SFP + RJ-45)
-LAN Port (Type):
  44 x 100/1000Mbps (SFP)
-Console Port (Type):
  1 x RS-232 Port (RJ-45)

Standards
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX/FX
IEEE802.3ab 1000Base-T
IEEE802.3z 1000Base-X
IEEE802.3az EEE
IEEE802.3x Flow Control
IEEE802.3ad Link Aggregation (LACP)
IEEE802.1ab LLDP
IEEE802.1p Priority
IEEE802.1q Tag VLAN
IEEE802.1d STP
IEEE802.1w RSTP
IEEE802.1X Port Based Network Access Control

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

H/W Specification
MAC Address Table: 16K
Non-Blocking Switching Fabric: 96Gbps
Memory Buffer: 1536K Bytes
VLAN Groups: 2K VLAN Groups
Priority Queues: 8 Queues
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

Forward / Filter Rate
10M: 14,880/14,880pps
100M: 148,800/148,800pps
1000M: 1,488,000/1,488,000pps

Features
- Broadcast Storm Control
- Unknown Unicast/Multicast Flood Control
- IEEE 802.1p with 8 Hardware Priority Queues
- IEEE 802.1Q Tag-Based and Port-Based VLAN
- Q-in-Q
- Weighted Round-Robin (WRR)/Strict-Priority
  Queuing (SPQ) Scheduling Algorithm
- Policy Based Rate Limiting
- Port Based Traffic Shaping
- Static Multicasting
- IGMP v1/v2/v3 Snooping
- IGMP Fast Leave
- IGMP Filtering via Filtering Profile
- MLD v1/v2 Snooping
- Multicast Channel Limitations per Port
- Multicast VLAN Registration (MVR) **
- IEEE 802.3ad Link Aggregation (LACP)
- Static port Trunking
- Up to 16 Aggregation Groups, 8 Ports per Group
- Spanning Tree Protocol (STP) / Rapid Spanning Tree
  Protocol (RSTP)
- Layer Link Discovery Protocol (LLDP)
- SFF-8472 (Digital Diagnostic Management Interface
  for SFP)
- IEEE 802.1X Authentication
- RADIUS Authentication for 802.1X
- DHCP Relay Agent with Option 82
- IP Source Guard (Static IP, DHCP Snooping)
- DHCP Server Trust Port
- Loop Detection
- Port Isolation
- Port Mirroring
- ACL Based on Physical port, IEEE802.1p, VID,
  TOS/DSCP, Ethertype, Protocol Type and L4 Port

- Wire Speed Rate Limiting per
  MAC/IP/TCP/UDP
- 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
- SNTP, Daylight Saving
- DHCP Client and Auto-Provision
- Text Based Configuration
- FTP, TFTP, HTTP Firmware & Configuration
  Upgrade
- Web, SNMP, SSHv2 and Telnet Console
  CLI Management
- RADIUS Client for Web, CLI
- SNMP v1/v2c - Private, RFC-1213, RMON
  MIBs
- Event Log, Syslog
- Dying Gasp (SNMP Power Down Trap)

Power Requirement
- Input AC : 100VAC-240VAC
- Input DC : 48VDC
Power Consumption : 55W

Environmental Condition
Operation: 0℃ ~ 50℃
Storage: -20℃ ~ 60℃
Humidity: 5% ~ 90%, Non-condensing

Dimension & Weight
Size: 440 x 290 x 44 mm (WxDxH)
Weight: 6.0 Kg

EMC/Safety
FCC Class A, CE

**Coming Soon.

Order Information

FOS-3148

MODEL	FIBER PORT					TP PORT		SUPPORT POWER SOURCE
	Speed	Type	Connector	Distance	Ports	Speed	Ports	Power Type
FOS-3148-1A	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 1 internal AC
FOS-3148-2A	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 2 internal AC
FOS-3148-1D	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 1 internal DC
FOS-3148-2D	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 2 internal DC
FOS-3148-1AD	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 1 internal AC and 1 internal DC
FOS-3148-BAT-1A	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 1 internal AC and 1 Battery Charging Unit
FOS-3148-BAT-P-1A	100/1000Mbps	SFP	-	-	48	10/100/1000Mbps	4	Fixed 1 internal AC /w AC Protector and 1 Battery Charging Unit

SFP-30

MODEL	COPPER PORT					Temperature
	Speed	Type	Connector	Distance		
SFP-30TP	1000Mbps	-	RJ-45	100M		0℃ to 70℃

SFP-31

MODEL	FIBER PORT					
	Speed	Type	Connector	Distance	Wavelength	Temperature
SFP-31FC	1000Mbps	MM	LC	550M	850nm	0℃ to 70℃
SFP-31FC(SM-10/20/40/50/80/100/120)	1000Mbps	SM	LC	10/20/40/50/80/100/120KM	1310nm/1310nm/1310nm/1550nm/1550nm 1550nm/1550nm	0℃ to 70℃
SFP-31W2A(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1310nm/1310nm/1310nm/1510nm RX:1550nm/1550nm/1550nm/1570nm	0℃ to 70℃
SFP-31W2B(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1550nm/1550nm/1550nm/1570nm RX:1310nm/1310nm/1310nm/1510nm	0℃ to 70℃
SFP-31FC-C11	1000Mbps	CWDM	LC	80KM	1470nm	0℃ to 70℃
SFP-31FC-C12	1000Mbps	CWDM	LC	80KM	1490nm	0℃ to 70℃
SFP-31FC-C13	1000Mbps	CWDM	LC	80KM	1510nm	0℃ to 70℃
SFP-31FC-C14	1000Mbps	CWDM	LC	80KM	1530nm	0℃ to 70℃
SFP-31FC-C15	1000Mbps	CWDM	LC	80KM	1550nm	0℃ to 70℃
SFP-31FC-C16	1000Mbps	CWDM	LC	80KM	1570nm	0℃ to 70℃
SFP-31FC-C17	1000Mbps	CWDM	LC	80KM	1590nm	0℃ to 70℃
SFP-31FC-C18	1000Mbps	CWDM	LC	80KM	1610nm	0℃ to 70℃

SFP-31-DR

MODEL	FIBER PORT					
	Speed	Type	Connector	Distance	Wavelength	Temperature
SFP-31FC-DR	100/1000Mbps	MM	LC	2KM/550M	1310nm	0℃ to 70℃
SFP-31FC(SM-10)-DR	100/1000Mbps	SM	LC	10KM	1310nm	0℃ to 70℃
SFP-31W2A(SM-10)-DR	100/1000Mbps	WDM	LC	10KM	TX:1310nm RX:1550nm	0℃ to 70℃
SFP-31W2B(SM-10/)-DR	100/1000Mbps	WDM	LC	10KM	TX:1550nm RX:1310nm	0℃ to 70℃