

# SWH-3112 Management Gigabit Ethernet Switch



8 ports Gigabit RJ-45 + 4 combo uplink ports  
(10/100/1000Mbps RJ-45 and 100/1000Mbps SFP)  
Managed Ethernet Switch

## Features

- **Adequate Management Interface**  
Support WEB, Telnet, CLI, SNMP and Out-band console interface
- **Commonly used Layer 2 Switch features**  
Port Configuration, Tag VLAN, QoS, Spanning Tree, LACP and L2 multicast IGMP
- **Security and Advance features**  
DHCP Snooping, Port mirror, Loop detection, IP Source Guard, Storm Control and MAC address limit
- **Management & Maintains features**  
Text based CLI configuration, TFTP/FTP for firmware & Configure upgrade, Event and Syslog.
- **IPv4/IPv6 Dual Stack**  
Support IPv6 management, packet forwarding and MLD v1/v2 snooping.

## Description

Connection Technology System (CTS) SWH-3112 Enterprise switch is a Gigabit Ethernet 10/100/1000Base-T to 100/1000Base-X switch with robust metal case. It switches the traditional twisted-pair RJ-45 cable into the most popular fiber optics media including multi-mode, single-mode, bi-directional WDM fiber transceiver. The fiber optics port of SWH-3112 can support connection distance from 550m to 20 Km or even reach 120 KM depending on the selected SFPs.

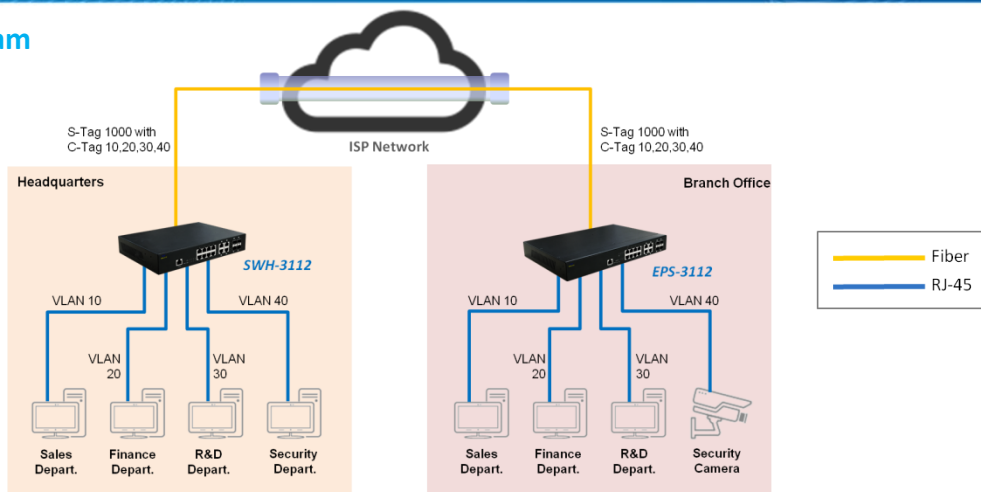
The SWH-3112 enterprise switch can be easily managed by Web GUI, telnet CLI, and SNMP. To fulfill the requirement of mass deployment, the device also supports the auto provisioning mechanism to allow the network managers to manage the device automatically and dynamically to save the OPEX.

The SWH-3112 is also designed to facilitate the deployment of SME networks by supporting various VLAN features such as port-based VLAN, Tag VLAN and Q-in-Q. With these features, the service providers would be able to connect a SME's branches in different locations and form a kind of local area network. It also support security features such as DHCP snooping, IP source guard, loop detection and storm controls to create a stable network.

## Target Applications

- Layer 2 Ethernet SMB requirement or Network Access layer application

## Application Diagram



## Specification

### Interface

- Uplink Port (Type):  
4 x 100/1000Mbps Combo (SFP + RJ45)
- LAN Port (Type):  
8 x 10/100/1000Mbps
- 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
- 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 : 8K
- Non-Blocking Switching Fabric : 24Gbps
- Memory buffer: 512K Bytes
- Jumbo frame : 9K Bytes
- Store and Forward Switching Mechanism
- Auto-Cross Over for MDI/MDUX in TP Ports
- Auto-Negotiation in TP Ports
- Full/Half Duplex Mode Operation

### LED

- Power , Link/Act , Sys

### 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
- 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
- LACP algorithm of source / destination IP, MAC , L4 Port
- Static Port Trunking
- Up to 6 Aggregation Groups, 8 ports per Group

#### Multicast

- IGMP Snooping v1/v2/v3
- IGMP Fast Leave
- 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)

#### Access Control List

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

### 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
- IP Source Guard

### Management

- SNMP v1/v2c/v3
- WEB/Telnet/SSH/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
- MAC Limiters
- LLDP
- Storm Control (Unicast/Multicast/Broadcast)

### Maintenance

#### Diagnostic

- Port Mirror
- ICMP Ping
- Event log
- Syslog
- SFP SFF-8472 DDMI monitor

#### Upgrade/Restore

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

#### Other

- Loop Detection

#### Monitoring

- CPU and Memory Statistics
- Switch Port Status , Traffic , packet Error , Packet Analysis Statics

### Power Requirement

- Input AC:100V-240V 50/60Hz
- Power Consumption: 12W

### Environmental Condition

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

### Dimension & Weight

- Size: 265 x 183 x 44 mm (W x D x H)
- Weight: 1.5 Kg

### EMC/Safety

- FCC Class A, CE

### Order Information

#### SWH-3112

Model	Fiber Ports					TP Ports		Support Power Source
	Speed	Type	Connector	Distance	Ports	Speed	Ports	
SWH-3112	100/1000 Mbps	SFP	-	-	4	10/100/1000 Mbps	12	Fixed 1 Internal AC