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 and SNMP power down trap.

- **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.
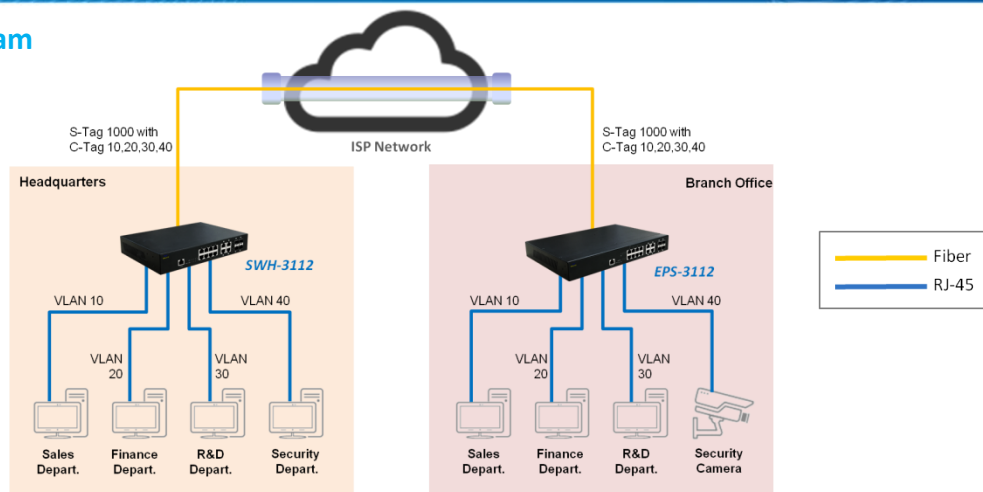
The SWH-3112 enterprise switch can be easily managed by Web GUI, telnet CLI, and SNMP. To fulfill the requirement of mass deployment, the device also supports the auto provisioning mechanism to allow the network managers to manage the device automatically and dynamically to save the OPEX. With CTS unique power down trap feature, SWH-3112 is able to send out a SNMP trap message when unexpected power outage occurs.

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

CTS
Innovation to your needs

Application Diagram

S-Tag 1000 with C-Tag 10,20,30,40 — ISP Network — S-Tag 1000 with C-Tag 10,20,30,40

Headquarters — SWH-3112 — VLAN 10, VLAN 20, VLAN 30, VLAN 40 — Sales Depart., Finance Depart., R&D Depart., Security Depart.

Branch Office — EPS-3112 — VLAN 10, VLAN 20, VLAN 30, VLAN 40 — Sales Depart., Finance Depart., R&D Depart., Security Camera

Fiber
RJ-45

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
-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

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-3112SFP	100/1000 Mbps	SFP	-	-	4	10/100/1000 Mbps	12	Fixed 1 Internal AC