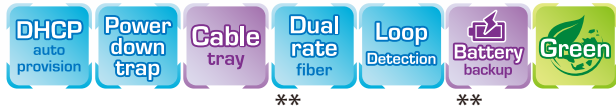


# HES-3109 Series Managed CPE Switch



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Gigabit Ethernet 8-Port 10/100/1000Base-T with 1-Port 1000Base-X or 100/1000Base-X or 10/100/1000Base-T Uplink Managed CPE Switch

## Features

- **Green Ethernet**  
Comply with IEEE 802.3az standard. It allows HES-3109 to have higher performance but with minimum power consumption
- **IGMP Snooping V1/V2**  
Support popular IGMP snooping v1/v2 to facilitate the IPTV service deployment
- **9K byte Jumbo frame**  
Support jumbo frame size 9K bytes to ease the network traffic loading and facilitate IPTV service
- **Support Q-in-Q VLAN**  
With Q-in-Q VLAN stacking, the service providers can transport the encapsulated traffic for different customers without security risk
- **DHCP Auto-Provision with Text based Config file**  
Fulfill the deployment requirement and reduce the OPEX of device maintenance for service providers or operators
- **SNMP Power down trap**  
Popular SNMP trap message to rapidly identify network fault due to power outage and reduce truck rolls to save OPEX for service providers
- **Smart Lighting Control**  
LED indicators for link activities and status can be quickly switched ON/OFF by pressing a control button. This Smart Lighting Control can turn off LED blinking indicators specially at night for household users to prevent light pollution
- **Optional Cable Tray**  
This is a flexible option for FTTH installation. Users can keep excessive fiber inside the cable tray to have extra protection for the sensitive fiber

## Target Applications

- **SOHO & Residential CPE switch which requires simple network management for FTTH service deployment**

\*\*  For Specific Model. Please check Order Information for details.

## Description

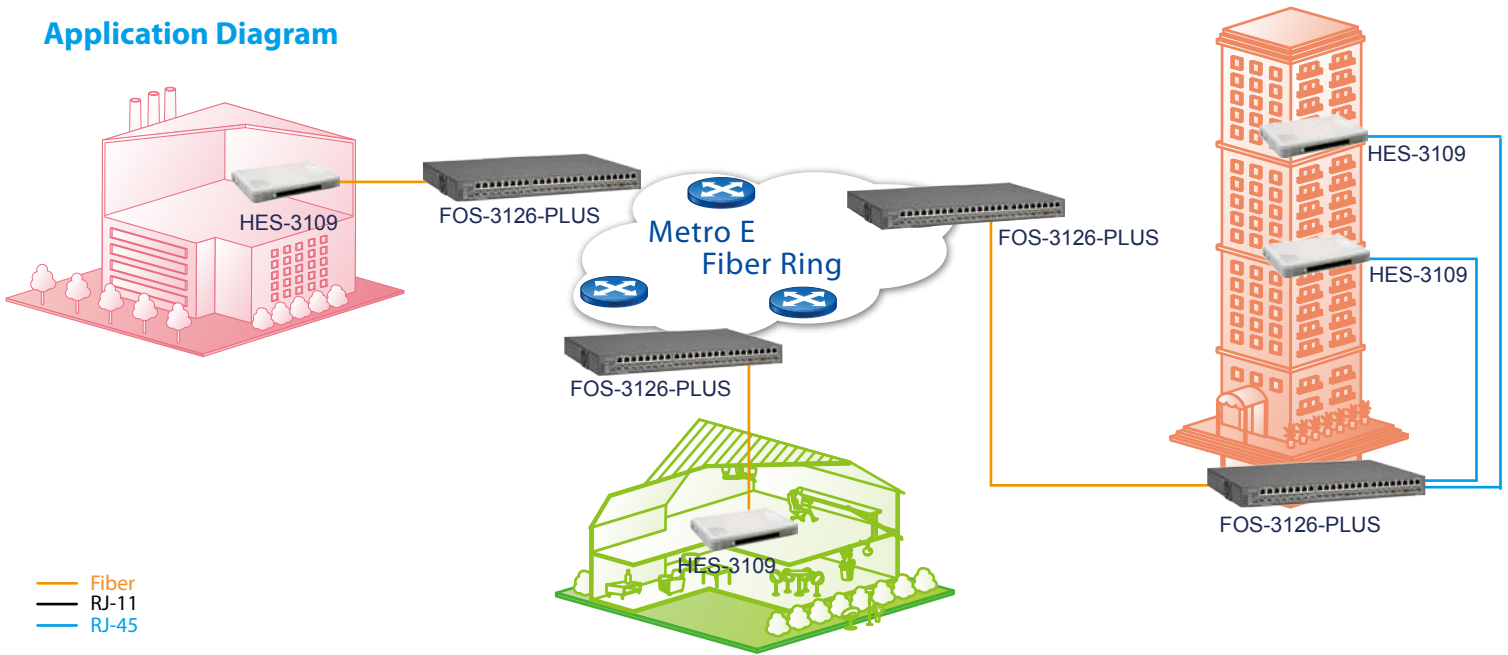
Connection Technology Systems (CTS) HES-3109 series CPE Switch are the Gigabit Ethernet 10/100/1000Base-T to 1000Base-X or 100/1000Base-X or 10/100/1000Base-T CPE Switch within an eye-catching pearl-white box. Often, the fiber is intentionally left longer than it actually needs. Optional cable tray allows users to enclose the excessive fiber within the box, providing extra protection for the sensitive fiber.

The HES-3109 series CPE Switch traditional twisted-pair RJ-45 cable into various fiber media including multi-mode, single-mode, bi-directional WDM, or a SFP slot for pluggable fiber transceiver. The traditional transmission distance of 100m over RJ-45 copper can be extended from 550M to 100KM over fiber.

HES-3109 series CPE Switch is fully compliant with IEEE 802.3, 802.3u, 802.3ab and 802.3z standards. You can connect another switch or NIC through HES-3109 series CPE switch 10/100/1000Base-T twisted-pair RJ-45 port without crossover cables and monitor the status through comprehensive LED display.

HES-3109 series CPE Switch can be easily managed by web interface, CLI, telnet, SNMP, and DHCP auto-provision. With CTS unique Power Down Trap feature, HES-3109 is able to send out a SNMP trap message when encountering power outage.

## Application Diagram



## Specification

### Interface

LAN Port  
10/100/1000Base-T RJ45 x 8  
WAN Port  
1000Base-X x 1 or 100/1000Base-X  
10/100/1000Base-T

### Standard

IEEE 802.3 10Base-T  
IEEE 802.3u 100Base-TX/FX  
IEEE 802.3ab 1000Base-T  
IEEE 802.3z 1000Base-X  
IEEE 802.1q Tag VLAN  
IEEE 802.1p Priority

### Product Specification

Store and forward switching mechanism  
Auto-Cross over for MDI/MDI-X in TP port  
Auto-Negotiation in TP port  
Full/Half Duplex Mode Operation  
8K MAC address table  
1M bits memory buffer

### Switch Feature

IGMP snooping V1/V2  
Bandwidth Control  
IEEE 802.1q Tag VLAN  
Q-in-Q Double Tag  
VLAN Groups: 128  
QoS support 802.1p and ToS Classification  
Priority Queues: 4 Queues

### Management feature

SNMP / CLI / Telnet interface  
TFTP Firmware update  
Storm Control  
DHCP Client  
DHCP Auto-Provision  
Text Based Config  
SFF-8472(digital diagnostic management interface for SFP)  
Power down trap  
Loop detection

### LED

Power , Port Link/Act, Status  
LED ON/OFF control button

### Power Requirement

Power adaptor  
- AC input: 100VAC~240VAC  
- Frequency range: 50~60Hz  
- DC output: 12V  
Power consumption:  
- AC side: 11.8W  
- DC side: 8.3W

### Environmental Condition

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

### Dimension & Weight

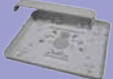
Main Unit:  
- Size: 228 x 148 x 33mm (WxDxH)  
- Shipping Weight: 1.6KG  
Main Unit with Cable tray  
- Size: 228 x 191.5 x 46mm (WxDxH)

### EMC/Safety

FCC class A, CE

\* For further reports, please contact us for update

## Order Information

HET-3109							
MODEL	FIBER PORT				TP PORT		SUPPORT POWER SOURCE
	Speed	Type	Connector	Distance	Speed	Ports	Power Type
HES-3109FC	1000	MM	SC	550M	10/100/1000	8	External Power Adapter
HES-3109FC(SM-10/20/30/50/80)	1000	SM	SC	10/20/30/50/80KM	10/100/1000	8	External Power Adapter
HES-3109W2A(SM-10/20/40)	1000	WDM	SC	10/20/40KM	10/100/1000	8	External Power Adapter
HES-3109W2B(SM-10/20/40)	1000	WDM	SC	10/20KM	10/100/1000	8	External Power Adapter
HES-3109W2A(SM-10/20)-DR	100/1000	WDM	SC	10/20KM	10/100/1000	8	External Power Adapter
HES-3109W2B(SM-10/20)-DR	100/1000	WDM	SC	10/20KM	10/100/1000	8	External Power Adapter
HES-3109SFP-DR	100/1000	SFP	-	-	10/100/1000	8	External Power Adapter
HES-3109TP	-	-	-	-	10/100/1000	9	External Power Adapter
HES-FCT	Fiber Cable Management Tray Unit For HES Series						

SFP-31-DR Series

MODEL	FIBER PORT				
	Speed	Type	Connector	Distance	Wavelength
SFP-31FC-DR	100Mbps/1000Mbps	MM	LC	550M/2KM	1310nm
SFP-31FC(SM-10)-DR	100Mbps/1000Mbps	SM	LC	10KM	1310nm
SFP-31W2A(SM-10/20)-DR	100Mbps/1000Mbps	WDM	LC	10/20KM	TX:1310nm RX:1550nm
SFP-31W2B(SM-10/20)-DR	100Mbps/1000Mbps	WDM	LC	10/20KM	TX:1550nm RX:1310nm

SFP-31 Series

MODEL	FIBER PORT				
	Speed	Type	Connector	Distance	Wavelength
SFP-31FC	1000Mbps	MM	LC	550M	850nm
SFP-31FC(SM-10/20/40/50/80/120)	1000Mbps	SM	LC	10/20/40/50/80/120KM	1310nm/1310nm/1310nm/1550nm/1550nm/1550nm
SFP-31W2A(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1310nm/1310nm/1310nm/1490nm RX:1550nm/1550nm/1550nm/1570nm
SFP-31W2B(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1550nm/1550nm/1550nm/1570nm RX:1310nm/1310nm/1310nm/1490nm
SFP-31FC-C09	1000Mbps	CWDM	LC	80KM	1430nm
SFP-31FC-C10	1000Mbps	CWDM	LC	80KM	1450nm
SFP-31FC-C11	1000Mbps	CWDM	LC	80KM	1470nm
SFP-31FC-C12	1000Mbps	CWDM	LC	80KM	1490nm
SFP-31FC-C13	1000Mbps	CWDM	LC	80KM	1510nm
SFP-31FC-C14	1000Mbps	CWDM	LC	80KM	1530nm
SFP-31FC-C15	1000Mbps	CWDM	LC	80KM	1550nm
SFP-31FC-C16	1000Mbps	CWDM	LC	80KM	1570nm
SFP-31FC-C17	1000Mbps	CWDM	LC	80KM	1590nm
SFP-31FC-C18	1000Mbps	CWDM	LC	80KM	1610nm

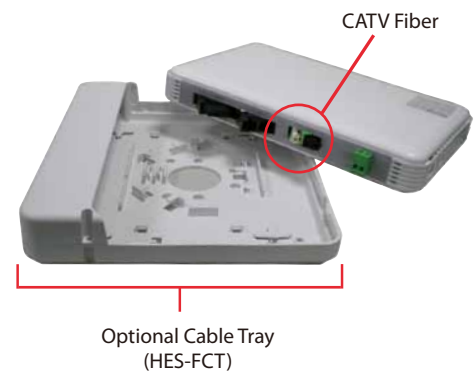
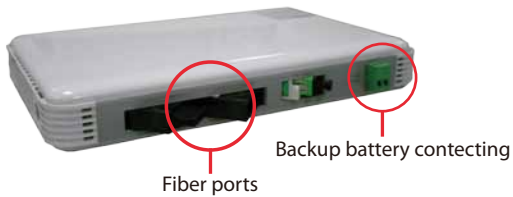
SFP-21 Series

MODEL	FIBER PORT				
	Speed	Type	Connector	Distance	Wavelength
SFP-21FC	100Mbps	MM	LC	2KM	1310nm
SFP-21FC(SM-20/40/80)	100Mbps	SM	LC	20/40/80KM	1310nm/1310nm/1550nm
SFP-21W2A(SM-20/40/80)	100Mbps	WDM	LC	20/40/80KM	TX:1310nm/1310nm/1490nm RX:1510nm/1510nm/1570nm
SFP-21W2B(SM-20/40/80)	100Mbps	WDM	LC	20/40/80KM	TX:1510nm/1510nm/1570nm RX:1310nm/1310nm/1490nm
SFP-21W2A(SM-20)SC	100Mbps	WDM	SC	20KM	TX:1310nm RX:1550nm
SFP-21W2B(SM-20)SC	100Mbps	WDM	SC	20KM	TX:1550nm RX:1310nm
SFP-21FC-C09	100Mbps	CWDM	LC	80KM	1430nm
SFP-21FC-C10	100Mbps	CWDM	LC	80KM	1450nm
SFP-21FC-C11	100Mbps	CWDM	LC	80KM	1470nm
SFP-21FC-C12	100Mbps	CWDM	LC	80KM	1490nm
SFP-21FC-C13	100Mbps	CWDM	LC	80KM	1510nm
SFP-21FC-C14	100Mbps	CWDM	LC	80KM	1530nm
SFP-21FC-C15	100Mbps	CWDM	LC	80KM	1550nm
SFP-21FC-C16	100Mbps	CWDM	LC	80KM	1570nm
SFP-21FC-C17	100Mbps	CWDM	LC	80KM	1590nm
SFP-21FC-C18	100Mbps	CWDM	LC	80KM	1610nm

## Optional Cable Tray Overview

With optional cable tray (HES-FCT)

Without cable tray



\* This is an overview of CTS HES series and does not represent specific product details.