

## HES-2109 Series CPE Switch



Fast Ethernet 8-Port 10/100Base-TX with 1-Port 100Base-FX or 10/100Base-TX Uplink Managed CPE Switch

### Features

- **Support IGMP Snooping V1/V2**  
IGMP snooping to quickly deploy 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**  
A LED-display which can be switched on/off by the end user for wall installations in private homes
- **Optional Cable Tray**  
This is a flexible option for FTTH installation. Cable tray can allow the fiber cable to have extra protection for the sensitive fiber

### Target Applications

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

### Description

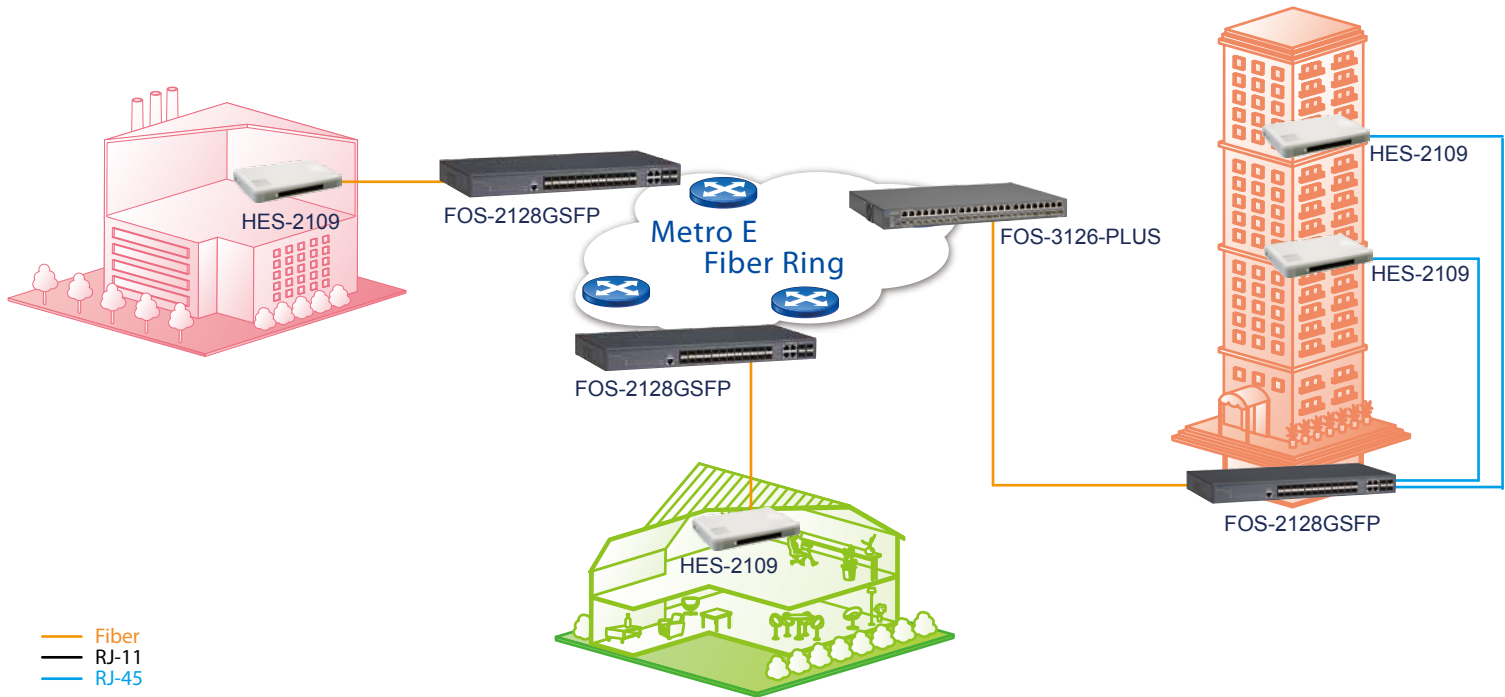
Connection Technology Systems (CTS) HES-2109 series CPE Switch are the Fast Ethernet 10/100Base-TX to 100Base-FX or 10/100Base-TX CPE Switch within an eye-catching pearl-white box. Often, the fiber is intentionally left longer than it actually needs. Optional cable tray allows users to enclose the excessive fiber within the box, providing extra protection for the sensitive fiber.

The HES-2109 series CPE Switch traditional twisted-pair RJ-45 cable into various fiber media including multi-mode, single-mode, SC/ST connector, 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 2km to 100km over fiber.

HES-2109 series CPE Switch is fully compliant with IEEE 802.3 & 802.3u standards. You can connect another switch or NIC through HES-2109 series CPE switch 10/100Base-TX twisted-pair RJ-45 port without crossover cables and monitor the status through comprehensive LED display.

HES-2109 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-2109 is able to send out a SNMP trap message when encountering power outage.

## Application Diagram



## Specification

### Interface

LAN Port  
10/100Base-TX RJ45 x 8  
WAN Port  
100Base-FX x 1 or 10/100Base-TX

### Standards

IEEE 802.3 10Base-T  
IEEE 802.3u 100Base-TX/FX  
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  
2K MAC address table  
80K bytes memory buffer

### Switch Feature

IGMP snooping V1/V2  
Bandwidth Control  
Port Isolation  
Tag VLAN  
Q-in-Q VLAN  
VLANs: Support to 16 VLAN Groups  
QoS support 802.1p and ToS Classification  
Priority Queues: 4 Queues

### Management feature

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

### 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: 6.9W  
- DC side: 5.18W

### Environmental Condition

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

### Dimension & Weight

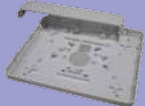
Main Unit:  
- Size: 228 x 148 x 33mm (WxDxH)  
- Shipping Weight: 1.6KG  
Main Unit with Cable tray  
- Size: 228 x 191.5 x 46mm (WxDxH)

### EMC/Safety

FCC class A, CE  
\* For further reports, please contact us for update

## Order Information

HES-2109 Series

MODEL	FIBER PORT					TP PORT		SUPPORT POWER SOURCE
	Speed	Type	Connector	Distance	Ports	Speed	Ports	Power Type
HES-2109FC	100	MM	SC	2KM	1	10/100	8	External Power adapter
HES-2109FT	100	MM	ST	2KM	1	10/100	8	External Power adapter
HES-2109FC(SM-30/50/80/100)	100	SM	SC	30/50/80/100KM	1	10/100	8	External Power adapter
HES-2109W2A(SM-20/40)	100	WDM	SC	20/40KM	1	10/100	8	External Power adapter
HES-2109W2B(SM-20/40)	100	WDM	SC	20/40KM	1	10/100	8	External Power adapter
HES-2109SFP	100	SFP	-	-	1	10/100	8	External Power adapter
HES-2109TP	-	-	-	-	-	10/100	9	External Power adapter
HES-2109FC-BAT	100	MM	SC	2KM	1	10/100	8	External Power adapter
HES-2109FT-BAT	100	MM	ST	2KM	1	10/100	8	External Power adapter
HES-2109FC(SM-30/50/80/100)-BAT	100	SM	SC	30/50/80/100KM	1	10/100	8	External Power adapter
HES-2109W2A(SM-20/40)-BAT	100	WDM	SC	20/40KM	1	10/100	8	External Power adapter
HES-2109W2B(SM-20/40)-BAT	100	WDM	SC	20/40KM	1	10/100	8	External Power adapter
HES-2109SFP-BAT	100	SFP	-	-	1	10/100	8	External Power adapter
HES-FCT	Fiber Cable Management Tray Unit For HES Series							

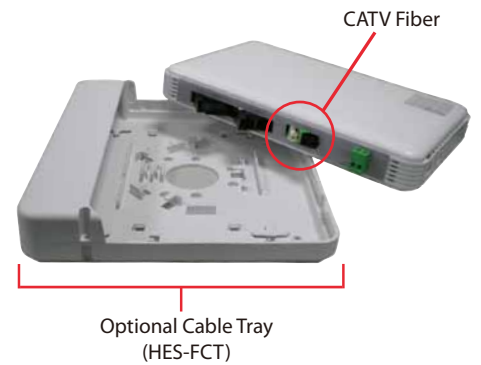
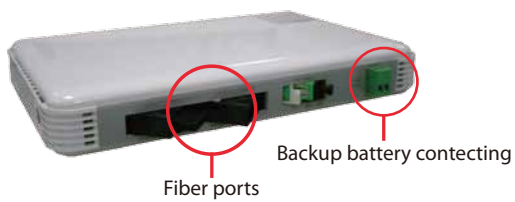
SFP-21 Series

MODEL	FIBER PORT					Wavelength
	Speed	Type	Connector	Distance		
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.