HES-3109-RF Series CPE Switch

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 and optic CATV RF receiver

DHCP auto provision	Power down trap	Cable tray	Dual rate fiber	Green

**

Features

▪ **Green Ethernet**
Comply with IEEE 802.3az standard. It allows HES-3109 to provide high performance with minimum power consumption

▪ **Support IGMP Snooping V1/V2**
IGMP snooping to quickly deploy IPTV service

▪ **9K byteJumbo 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**
A LED-display which can be switched on/off by the end user for wall installations in private homes

▪ **Support CATV RF receiver**
Provide the option of provisioning analog video service to create new subscriber base and revenue for service providers

▪ **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 FTTX service deployment and traditionally CATV service

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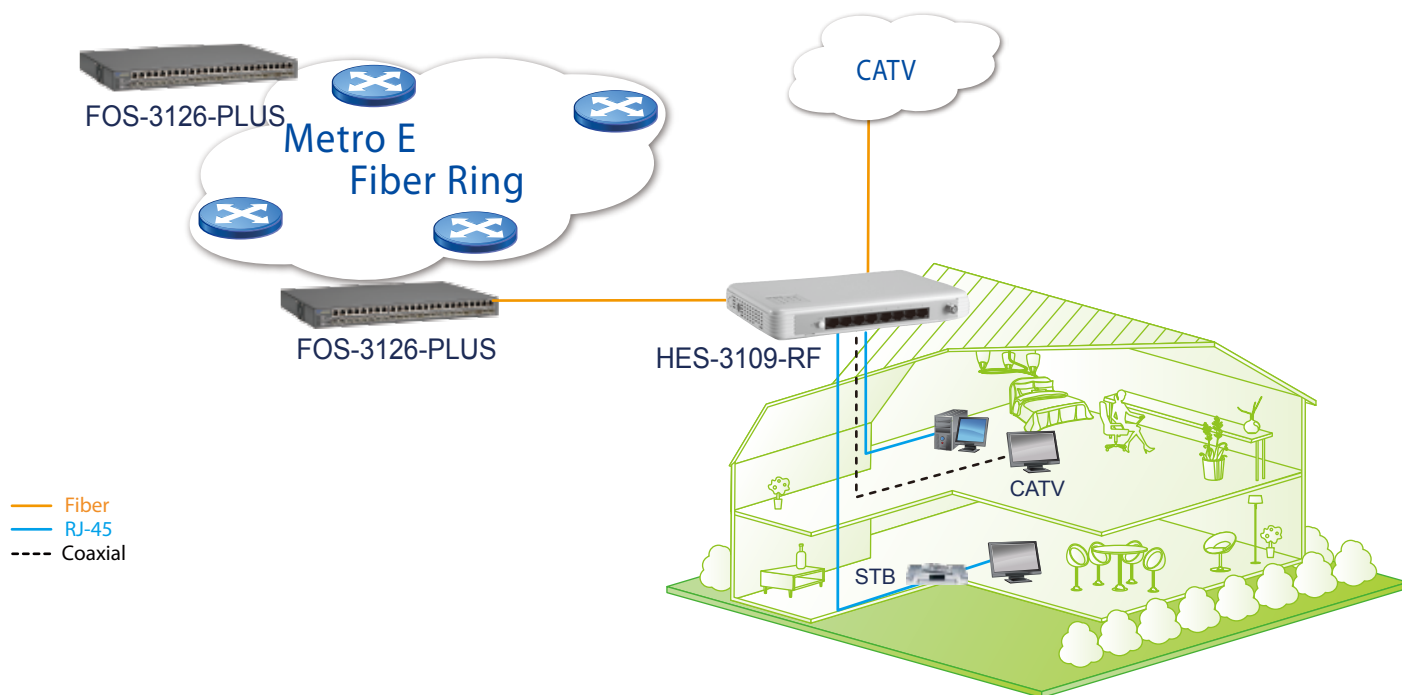
Description

Connection Technology Systems (CTS) HES-3109-RF series CPE Switch are the Fast Ethernet 10/100/1000Base-T to 1000Base-X or 100/1000Base-X or 10/100/1000Base-T and traditionally CATV services 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-RF 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-RF 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-part RJ-45 port without crossover cables and monitor the status through comprehensive LED display.

HES-3109-RF 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-RF is able to send out a SNMP trap message when encountering power outage.

Application Diagram

FOS-3126-PLUS

Metro E
Fiber Ring

CATV

FOS-3126-PLUS

HES-3109-RF

CATV

STB

— Fiber
— RJ-45
---- Coaxial

Specification

Interface
LAN Port
10/100/1000Base-T RJ45 x 8
WAN Port
1000Base-X x 1or 100/1000Base-X
10/100/1000Base-T
CATV Fiber optic input x 1
NTSC/PAL CATV coaxial output x 1

Standards
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

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

Switch Feature
IGMP snooping V1/V2
Bandwdith Control
Tag VLAN

Q-in-Q VLANVLANs: Support to 32 VLAN Groups
QoS support 802.1p and ToS Classification
Priority Queues: 4 Queues

Management feature
SNMP / CLI / Telent 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

CATV RF receiver
Input optic wavelength: 1200 ~ 1620 nm
Input ¬fiber optic power: -8 ~ -2 dBm
Fiber optic connector: SC/APC
Forward path frequency range: 54 ~870 MHz
Transmission channel capacity
NTSC: 70 channel
PAL: 60 channel
Output power level:
24dBmV @-5dBm optical input
CNR: 48dB@-4dBm optical input
CSO: max -65dBc@-4dBm optical input
CTB: max -67dBc@-4dBm optical input
Output Return Loss: max -16 dB
Flatness: ±1dB

Power Requirement
Power adaptor
- AC input: 100VAC~240VAC
- Frequency range: 50~60Hz
- DC output: 12V
Power consumption:
- AC side: 15.1W
- DC side: 10.8W

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

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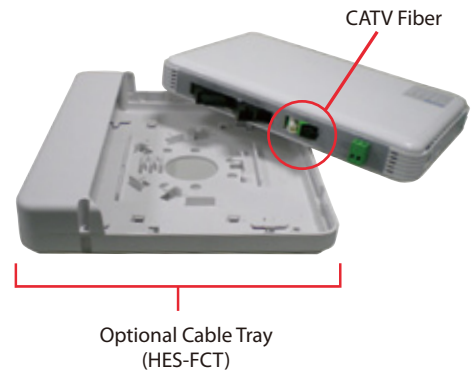Main Unit with Cable tray
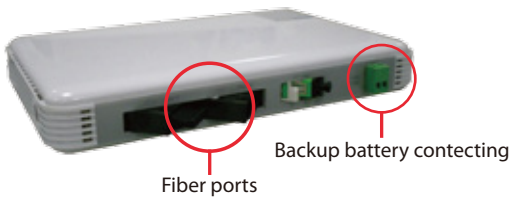- Size: 228 x 191.5 x 46mm (WxDxH)

EMC/Safety
FCC class A, CE
* For further reports, please contact us for update

Optional Cable Tray Overview

With optional cable tray (HES-FCT)

Without cable tray

CATV Fiber

Fiber ports

Backup battery contecting

Optional Cable Tray
(HES-FCT)

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

Order Information

MODEL	FIBER PORT				TP PORT		CATV RF		SUPPORT POWER SOURCE
	Speed	Type	Connector	Distance	Speed	Ports	Fiber	Coaxial	POWER TYPE
HES-3109W2A(SM-10/20/40)-RF	1000	WDM	SC	10/20/40KM	10/100/1000	8	1	1	External Power Adapter
HES-3109W2B(SM-10/20/40)-RF	1000	WDM	SC	10/20/40KM	10/100/1000	8	1	1	External Power Adapter
HES-3109W2A(SM-10/20)-DR-RF	100/1000	WDM	SC	10/20KM	10/100/1000	8	1	1	External Power Adapter
HES-3109W2B(SM-10/20)-DR-RF	100/1000	WDM	SC	10/20KM	10/100/1000	8	1	1	External Power Adapter
HES-3109SFP-DR-RF	100/1000	SFP	-	-	10/100/1000	8	1	1	External Power Adapter
HES-FCT	Fiber Cable Management Tray Unit For HES Series								