

HES-3106 Series Managed CPE Switch



**

Gigabit Ethernet 5-Port 10/100/1000Base-T with 1-Port 1000Base-X or 100/1000Base-X or 10/100/1000Base-T Uplink Managed CPE Switch

Features

- **IGMP Snooping v1/v2**
Support popular IGMP snooping v1/v2 to facilitate the IPTV service deployment
- **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
- **Dual Rate with Auto-Sensing Function**
Dual Rate CPE Switch with auto-sensing function can automatically adjust to the speed of the slide-in fiber transceiver. This can save the cost when upgrading the device from 100Mbps to 1000Mbps
- **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.
- **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
- **Green Ethernet**
Comply with IEEE 802.3az standard. It allows HES-3106 to provide high performance with minimum power

Description


Connection Technology System (CTS) HES-3106 series CPE switch is the Gigabit Ethernet 10/100/1000Base-T to 1000Base-X or 100/1000Base-X CPE switch with eye-catching pearl-white box. It switches the traditional twisted-pair RJ-45 cable into various fiber optics media including multi-mode, single-mode, SC/ST connector, bi-directional WDM fiber transceiver. The fiber optics port of HES-3106 can support connection distance from 550m to 20 Km or even reach 120 KM via multi-mode fiber, single mode fiber or Bi-directional single mode fiber for the deployment to the household, apartment or campus.

The HES-3106 series CPE switch is fully compliant with IEEE 802.3, 802.3u, 802.3ab, and 802.3z standards. The user can connect other switches or NIC through HES-3106 series CPE switch into RJ45 ports without crossover cables and monitor the status through comprehensive LED display.

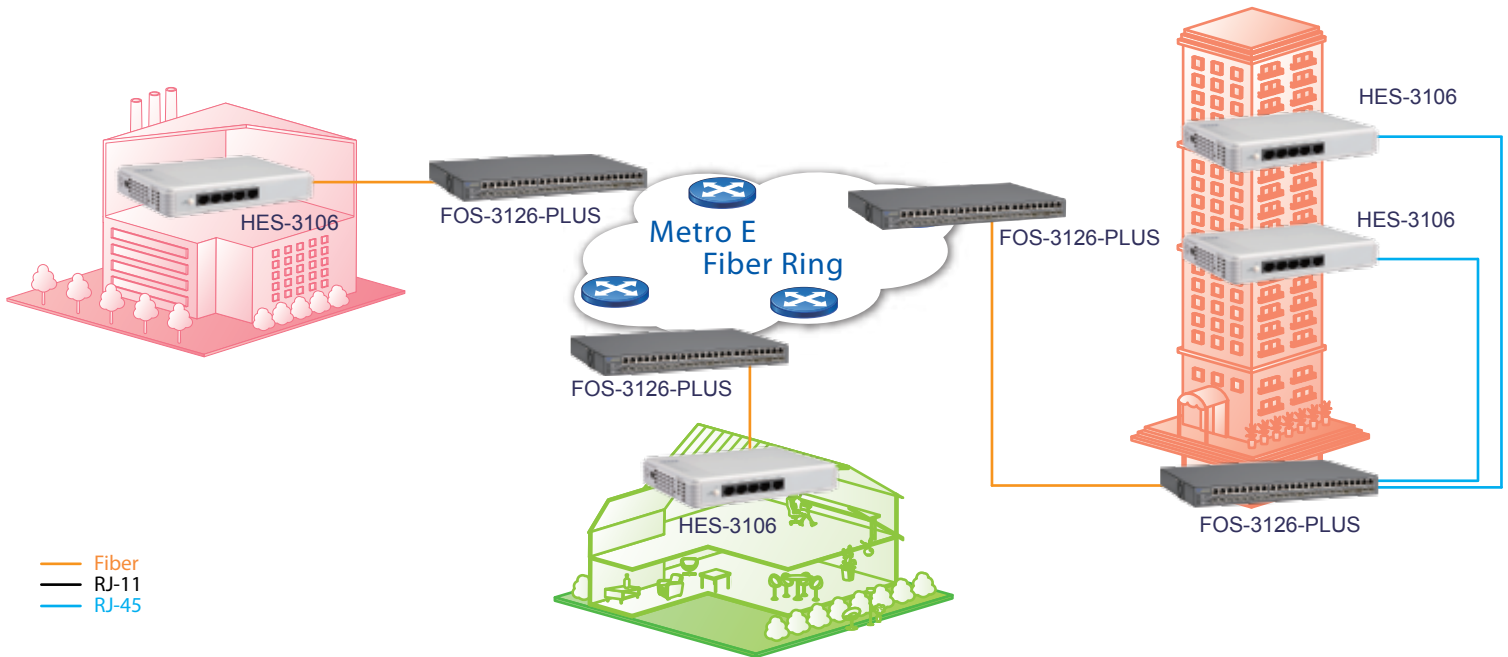
The HES-3106 series CPE switch can be easily managed by Web GUI, telnet CLI, and SNMP. To fulfill the requirement of mass deployment, the device also supports the auto provisioning mechanism to allow the operators or service providers to manage the device automatically and dynamically. Consequently, it can significantly help to save the OPEX (operational cost) for the operators or service providers. With CTS unique power down trap feature, HES-3106 is able to send out a SNMP trap message when unexpected power outage occurs.

Target Applications

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

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

Application Diagram



Specification

Interface

LAN: 10/100/1000Base-T RJ45 x 5
 WAN: 1000Base-X F/O or 100/1000Base-X F/O or 10/100/1000Base-T x 1

Standard

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

H/W Specification

Store and Forward Switching Mechanism
 Auto Crossover for MDI/MDI-X in TP port
 Auto Negotiation in TP port
 Half/Full Duplex Mode Operation
 Jumbo Frame: 9K bytes
 MAC Address Table: 2K
 VLAN ID: 4K
 Priority Queues: 4 Queues

Forward / Filter Rate

10M: 14,880/14,880pps
 100M: 148,800/148,800pps
 1000M: 1,488,000/1,488,000pps

LED

Power, LAN, F/O, Status,

Switch Feature

Port Based VLAN
 Q-in-Q Double Tag
 IEEE802.1q Tag Based VLAN
 Support 128 VLAN Groups
 QoS Based on P-bit, VLAN & DSCP
 Bandwidth Control
 IGMP Snooping v1/v2

Network Management

Web Management
 Telnet CLI
 SNMP Management
 SNMP v1/v2c
 DHCP Client
 DHCP Auto Provision
 Power Down Trap
 FTP/TFTP Firmware Upgrade
 Loop Detection

Power Requirement

External Power adaptor
 AC input: 100VAC~240VAC
 Frequency range: 50~60Hz
 DC output rating: 12V/1.5A
 Power Consumption
 - AC side: 7.08W (MAX.)
 - DC side: 5.8W (MAX.)

Environmental Condition

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

Dimension & Weight

HES-3106
 - Size: 180x 130 x 30mm (WxDxH)
 - Shipping Weight: 0.85kg

HES-3106 with Cable Tray
 - Size: 180x180x42mm (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-S)

Without cable tray



Fiber Port



Optional Cable Tray

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

Order Information

HES-3106 Series

| Model | Fiber port | | | | | TP port | | Power Type |
|-------------------------------|---|------|-----------|------------------|------|--------------|-------|------------------------|
| | Speed | Type | Connector | Distance | Port | Speed | Ports | External power adaptor |
| HES-3106FC | 1000M | MM | SC | 550m | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106FC(SM-10/20/30/50/80) | 1000M | SM | SC | 10/20/30/50/80Km | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106W2A(SM-10/20) | 1000M | WDM | SC | 10/20 Km | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106W2B(SM-10/20) | 1000M | WDM | SC | 10/20 Km | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106W2A(SM-10/20)-DR | 100/1000 | WDM | SC | 10/20 Km | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106W2B(SM-10/20)-DR | 100/1000 | WDM | SC | 10/20 Km | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106SFP-DR | 100/1000 | SFP | - | - | 1 | 10/100/1000M | 5 | External power adaptor |
| HES-3106TP | - | - | - | - | - | 10/100/1000M | 6 | External power adaptor |
| HES-FCT-S | Fiber Cable Management Tray Unit For HES Series | | | | | | | |

Order Information

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 |