

HES-3106 Managed Ethernet 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

**** Dual rate fiber** For Specific Model. Please check Order Information for details.

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 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 automatican 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 blinking indicators specailly 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 consumption.

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.

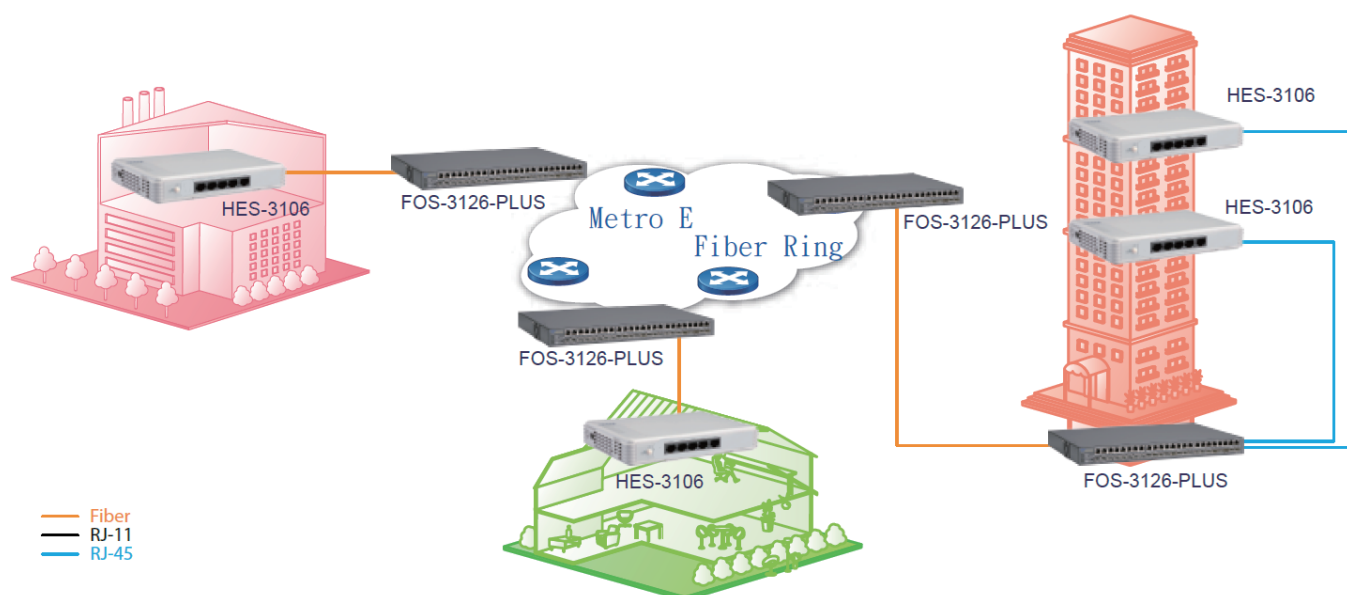
The HES-3106 series CPE switch is fully compliant with IEEE 802.3, 802.3u, 802.3ab, and 802.3z standards. The user can connect other switches or NIC through HES-3106 series CPE switch into RJ45 ports without crossover cables and monitor the status through comprehensive LED display.

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 application which requires network managemnet for FTTH service deployment.**

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

Standards

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
 Non-Blocking Switching Fabric: 12Gbps
 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

IPv4/IPv6 dual stack
 Stateless Address Autoconfiguration (SLAAC)
 Web Management
 Telnet CLI
 SNMP Management
 Support SNMP v1/v2c
 DHCP Client
 DHCP Auto Provision
 DHCPv6
 Power-Down Trap
 FTP/TFTP Firmware Upgrade
 Load Detection
 Network Time Protocol (NTP)

Power Requirement

External Power adaptor
 AC input: 100VAC~240VAC
 Frequency range: 50~60Hz
 DC output rating: 12V/1.5A
 Power Consumption
 - AC side: 8.1W (MAX.)
 - DC side: 6.4W (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)
 - Weight: 0.32kg
 - Shipping Weight: 0.6Kg
 HES-3106 with Cable Tray
 - Size: 180x180x42mm (WxDxH)

EMC/Safety

FCC Class A, CE

Optional Cable Tray Overview

With optional cable tray (HES-FCT-S)

Without cable tray



Fiber Port

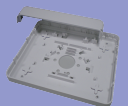


Optional Cable Tray

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

HES-FCT-S

Fiber Cable Management Tray Unit For HES Series



Order Information

HES-3106 / HES-3106-DR

MODEL	FIBER PORT					TP PORT		CATV RF		SUPPORT POWER
	Speed	Type	Connector	Distance	Ports	Speed	Ports	Fiber	Coaxial	Power Type
HES-3106FC	1000Mbps	MM	SC	550M	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106FC(SM-10/20/30/50/80)	1000Mbps	SM	SC	10/20/30/50/80KM	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106W2A(SM-10/20/40)	1000Mbps	WDM	SC	10/20/40KM	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106W2B(SM-10/20/40)	1000Mbps	WDM	SC	10/20/40KM	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106W2A(SM-10)-DR	100/1000Mbps	WDM	SC	10KM	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106W2B(SM-10)-DR	100/1000Mbps	WDM	SC	10KM	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106SFP-DR	100/1000Mbps	SFP	-	-	1	10/100/1000Mbps	5	-	-	External Power Adapter
HES-3106TP	-	-	-	-	-	10/100/1000Mbps	6	-	-	External Power Adapter
HES-3106W2A(SM-10/20/40)-RF	1000Mbps	WDM	SC	10/20/40KM	1	10/100/1000Mbps	5	1	1	External Power Adapter
HES-3106W2B(SM-10/20/40)-RF	1000Mbps	WDM	SC	10/20/40KM	1	10/100/1000Mbps	5	1	1	External Power Adapter
HES-3106W2A(SM-10)-DR-RF	100/1000Mbps	WDM	SC	10KM	1	10/100/1000Mbps	5	1	1	External Power Adapter
HES-3106W2B(SM-10)-DR-RF	100/1000Mbps	WDM	SC	10KM	1	10/100/1000Mbps	5	1	1	External Power Adapter
HES-3106SFP-DR-RF	100/1000Mbps	SFP	-	-	1	10/100/1000Mbps	5	1	1	External Power Adapter
HES-FC-T-S	Fiber Cable Tray Unit for HES Series									

SFP-31

MODEL	FIBER PORT					
	Speed	Type	Connector	Distance	Wavelength	Temperature
SFP-31FC	1000Mbps	MM	LC	550M	850nm	0°C to 70°C
SFP-31FC(SM-10/20/40/50/80/100/120)	1000Mbps	SM	LC	10/20/40/50/80/100/120KM	1310nm/1310nm/1310nm/1550nm/1550nm/1550nm/1550nm	0°C to 70°C
SFP-31W2A(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1310nm/1310nm/1310nm/1510nm RX:1550nm/1550nm/1550nm/1570nm	0°C to 70°C
SFP-31W2B(SM-10/20/40/80)	1000Mbps	WDM	LC	10/20/40/80KM	TX:1550nm/1550nm/1550nm/1570nm RX:1310nm/1310nm/1310nm/1510nm	0°C to 70°C
SFP-31FC-C11	1000Mbps	CWDM	LC	80KM	1470nm	0°C to 70°C
SFP-31FC-C12	1000Mbps	CWDM	LC	80KM	1490nm	0°C to 70°C
SFP-31FC-C13	1000Mbps	CWDM	LC	80KM	1510nm	0°C to 70°C
SFP-31FC-C14	1000Mbps	CWDM	LC	80KM	1530nm	0°C to 70°C
SFP-31FC-C15	1000Mbps	CWDM	LC	80KM	1550nm	0°C to 70°C
SFP-31FC-C16	1000Mbps	CWDM	LC	80KM	1570nm	0°C to 70°C
SFP-31FC-C17	1000Mbps	CWDM	LC	80KM	1590nm	0°C to 70°C
SFP-31FC-C18	1000Mbps	CWDM	LC	80KM	1610nm	0°C to 70°C

SFP-31-DR

MODEL	FIBER PORT					
	Speed	Type	Connector	Distance	Wavelength	Temperature
SFP-31FC-DR	100Mbps/1000Mbps	MM	LC	2KM/550M	1310nm	0°C to 70°C
SFP-31FC(SM-10)-DR	100Mbps/1000Mbps	SM	LC	10KM	1310nm	0°C to 70°C
SFP-31W2A(SM-10)-DR	100Mbps/1000Mbps	WDM	LC	10KM	TX:1310nm RX:1550nm	0°C to 70°C
SFP-31W2B(SM-10)-DR	100Mbps/1000Mbps	WDM	LC	10KM	TX:1550nm RX:1310nm	0°C to 70°C