

## HES-3106-PLUS Managed CPE Switch



5-Port 10/100/1000Base-T + 1-Port 100/1000Base-X or  
4-Port 10/100/1000Base-T + 1-Port 10/100/1000Base-T  
and 100/1000Base-X Combo WAN Gigabit Ethernet  
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
- **Combo WAN Port with Auto-Detection Technology**  
Support both fiber and TP WAN port with auto-detection function to fit in various kinds of deployment and save manual setting efforts. TP WAN can be also configured to be LAN 5 (hidden port)
- **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 the device to provide high performance with minimum power

### Target Applications

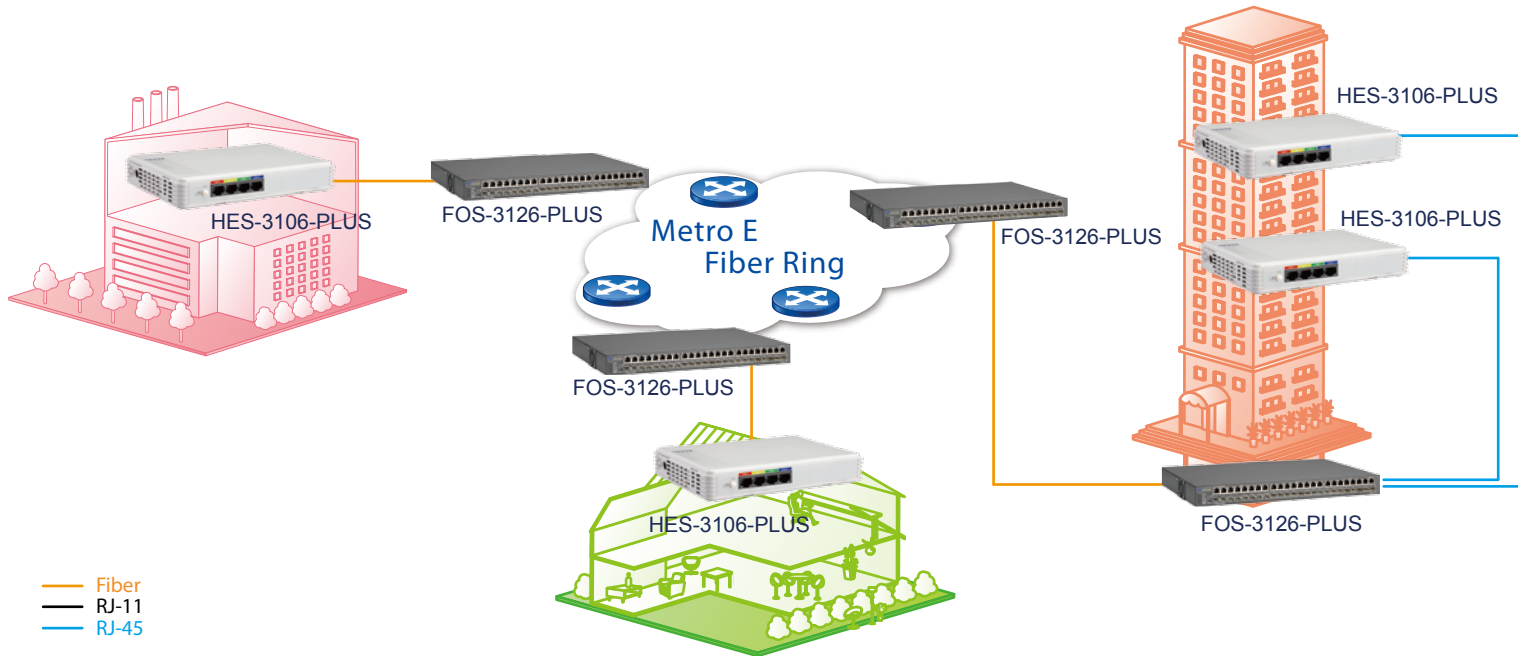
- SOHO & Residential CPE switch which requires network management for FTTH service deployment

### Description

Connection Technology System (CTS) HES-3106-PLUS is a CPE switch with five gigabit copper LAN ports and one gigabit fiber WAN port, and is housed in an eye-catching pearl-white case. 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-3105-DW-DR 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.

HES-3106-PLUS 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-3105-DW-DR CPE switch into RJ45 ports without crossover cables and monitor the status through comprehensive LED display. It can be easily managed via 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-PLUS is able to send out a SNMP trap message when unexpected power outage occurs.

## Application Diagram



## Specification

### Interface

LAN: 10/100/1000Base-T RJ45 x 5  
 (x4 when LAN 5 is set as a WAN Port)  
 WAN: 100/1000Base-X or 10/100/1000Base-T x 1  
 (auto-detection)

### 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  
 TR069 (upon request)

### Power Requirement

External Power adaptor  
 AC input: 100VAC~240VAC  
 Frequency range: 50~60Hz  
 DC output rating: 12V/1.5A  
 Power Consumption  
 - AC side: 6.2W (MAX.)  
 - DC side: 7.4W (MAX.)

### Environmental Condition

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

### Dimension & Weight

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

HES-3106-PLUS 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 )

#### Front :



#### Rear :



### Without cable tray

#### Front (Customer Side) :



#### Rear(Operator Side) :



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

### Order Information

MODEL	FIBER PORT					TP PORT		SUPPORT POWER SOURCE
	Speed	Type	Connector	Distance	Ports	Speed	Ports	Power Type
HES-3106FC-PLUS	1000	MM	SC	550M	1	10/100/1000	5	External Power adapter
HES-3106FC(SM-10/20/30/50)-PLUS	1000	SM	SC	10/20/30/50KM	1	10/100/1000	5	External Power adapter
HES-3106W2A(SM-10/20/40)-PLUS	1000	WDM	SC	10/20/40KM	1	10/100/1000	5	External Power adapter
HES-3106W2B(SM-10/20/40)-PLUS	1000	WDM	SC	10/20/40KM	1	10/100/1000	5	External Power adapter
HES-3106W2A(SM-10/20)-PLUS-DR	100/1000	WDM	SC	10/20KM	1	10/100/1000	5	External Power adapter
HES-3106W2B(SM-10/20)-PLUS-DR	100/1000	WDM	SC	10/20KM	1	10/100/1000	5	External Power adapter
HES-3106SFP-PLUS-DR	100/1000	SFP	-	-	1	10/100/1000	5	External Power adapter
HES-FCT-S	Fiber Cable Management Tray Unit For HES Series							