

HES-3106-RF Series Managed CPE Switch



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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
- **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-RF to provide high performance with minimum power
- **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. Users can keep excessive fiber inside the cable tray to have extra protection for the sensitive fiber

Gigabit Ethernet 5-Port 10/100/1000Base-T with 1-Port 1000Base-X or 100/1000Base-X Uplink Managed CPE Switch and Optic CATV RF Receiver

Description

Connection Technology System (CTS) HES-3106-RF series CPE switches support the conversion between 10/100/1000Base-T and 1000Base-X or 100/1000Base-X network. Equipped with the CATV RF receiver, HES-3106-RF is also able to deliver CATV service which can be activated or inactivated via management system. It is fully compliant with IEEE 802.3, 802.3u, 802.3ab, and 802.3z standards. The user can connect other switches or NIC to HES-3106-RF with RJ45 ports without crossover cables and monitor the status through comprehensive LED display.

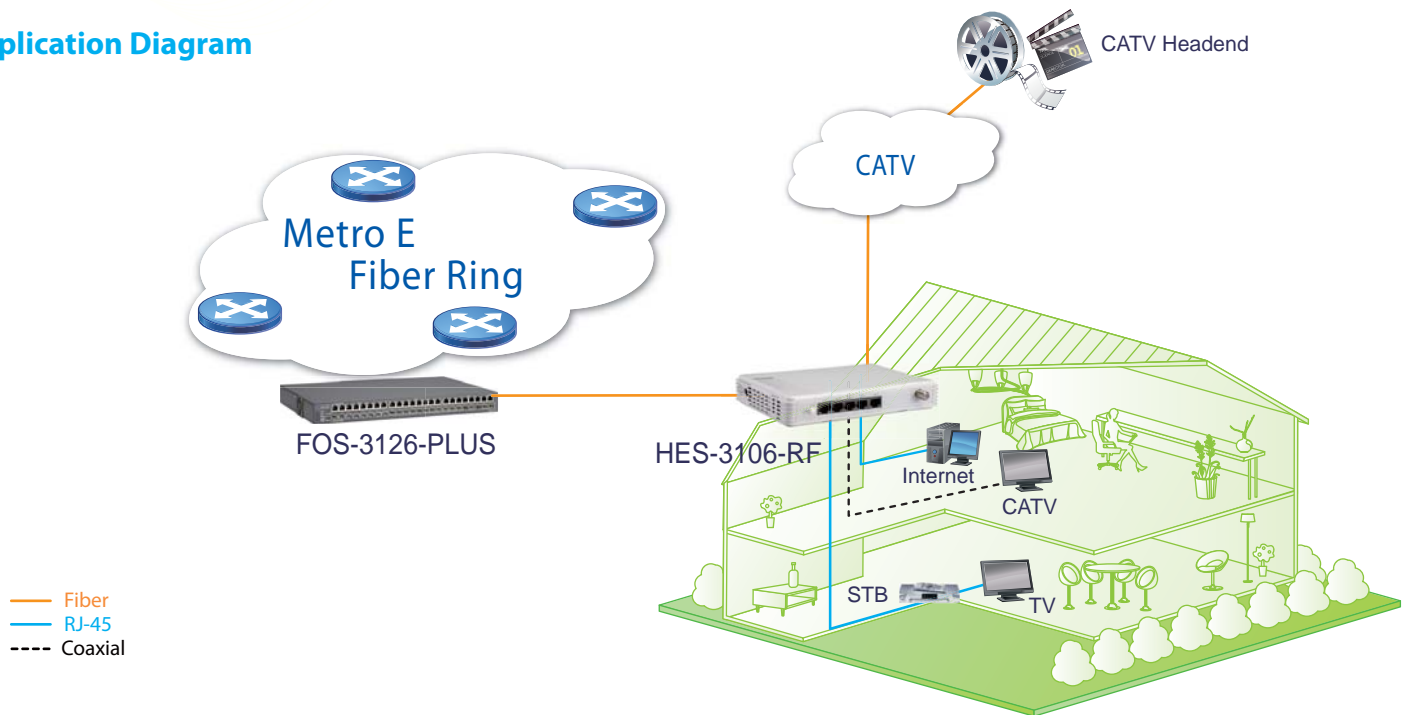
The HES-3106-RF series CPE switches can be easily managed by Web GUI, telnet CLI, and SNMP. To fulfill the requirement of mass deployment, the HES-3106-RF also supports the auto provisioning mechanism to allow the operators or service providers to manage the device automatically and dynamically. Consequently, 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-RF 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
 CATV Fiber optic input x 1
 NTSC/PAL CATV coaxial output 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

CATV RF Receiver

Input Optic Wavelength: 1260~1610nm
 Input Fiber Optic Power: -6~0dBm
 (AGC controlled receiver with -6 to 0 dBm dynamic range)
 Fiber Optic Connector: SC/APC
 Forward Path Frequency Range: 45~1003MHz
 Output Power Level: 88dBuV
 CNR: Min 46dB@-6dBm; OMI=3.5%
 CSO: Min 55dBc@0dBm; OMI=3.5%
 CTB: Min 55dBc@0dBm; OMI=3.5%
 Output Return Loss: 16dB
 Flatness: ±1dB

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: 11.45W (MAX.)
 - DC side: 6.78W (MAX.)

Environmental Condition

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

Dimension & Weight

HES-3106-RF
 - Size: 180x 130 x 32mm (WxDxH)
 - Shipping Weight: 0.68Kg

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

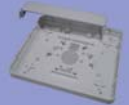
EMC/Safety

FCC Class B,
 CE

For further reports, please contact us for update

Order Information

HES-3106-RF Series

MODEL	FIBER PORT					TP PORT		CATV RF		
	Speed	Type	Connector	Distance	Ports	Speed	Ports	Fiber	Coaxial	
HES-3106W2A(SM-10/20)-RF	1000M	WDM	SC	10/20KM	1	10/100/1000	5	1	1	
HES-3106W2B(SM-10/20)-RF	1000M	WDM	SC	10/20KM	1	10/100/1000	5	1	1	
HES-3106W2A(SM-10)-DR-RF	100/1000	WDM	SC	10KM	1	10/100/1000	5	1	1	
HES-3106W2B(SM-10)-DR-RF	100/1000	WDM	SC	10KM	1	10/100/1000	5	1	1	
HES-3106SFP-DR-RF	1000M	SFP	-	-	1	10/100/1000	5	1	1	
HES-FCT-S	Fiber Cable Management Tray Unit For VRGIII & HES Series									

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)-DR	100Mbps/1000Mbps	WDM	LC	10KM	TX:1310nm RX:1550nm
SFP-31W2B(SM-10)-DR	100Mbps/1000Mbps	WDM	LC	10KM	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

Optional Cable Tray Overview

With optional cable tray (HES-FCT-S)

Without cable tray



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