KTI
NETWORKS

KGC-320, KGC-320-HP

Web Smart

Gigabit Ethernet Media Converter

10/100/1000BASE-T to 100/1000BASE-X

Installation Guide

R

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FCC WARNING AND NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTICE:

(1) The changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment.

(2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

CISPR A COMPLIANCE

This device complies with CISPR Class A.

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE

Marking by the symbol "CE" indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:

EMC Class A

EN 61000-6-3   IEC 61000-6-3

> EN 55022   CISPR 22 Class A

> EN 61000-3-2 IEC 61000-3-2

> EN 61000-3-3 IEC 61000-3-3

EN 55024 CISPR 24

> EN 61000-4-2 IEC 61000-4-2

> EN 61000-4-3 IEC 61000-4-3

> EN 61000-4-4 IEC 61000-4-4

> EN 61000-4-5 IEC 61000-4-5

> EN 61000-4-6 IEC 61000-4-6

> EN 61000-4-8 IEC 61000-4-8

> EN 61000-4-11 IEC 61000-4-11

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1. Introduction

The device is a Gigabit Ethernet media converter series which provide the following features:

Data Conversion between different Media types and Speed

The media converter supports the following conversions:

- 1000Mbps (1000BASE-T) copper to/from 1000Mbps (1000BASE-X) fiber
- 100Mbps (1000BASE-TX) copper to/from 1000Mbps (1000BASE-X) fiber
- 10Mbps (10BASE-T) copper to/from 1000Mbps (1000BASE-X) fiber
- 1000Mbps (1000BASE-T) copper to/from 100Mbps (100BASE-FX) fiber
- 100Mbps (1000BASE-TX) copper to/from 100Mbps (100BASE-FX) fiber
- 10Mbps (10BASE-T) copper to/from 100Mbps (100BASE-FX) fiber

Dual-speed Fiber Connectivity

The converter is featured with two different SFP slots. One is designed for accommodating Gigabit Ethernet 1000BASE-X optical fiber transceiver and the other is designed for accommodating Fast Ethernet 100BASE-FX optical fiber transceiver. Each SFP can be installed with variety of optional transceivers supporting multimode or single mode fiber for short reach up to long reach distance.

Power over Ethernet support

The copper port is featured Power over Ethernet (PoE) function. With proper 48VDC power supply, it is able to deliver power to one PoE powered device (PD) via Cat.5 cable together with LAN data.

Loop-back Test Support

The media converter provides loop-back test function which can verify the fiber link with its link partner by sending test packets to the link partner and verifying the echo packets sent back. This feature is helpful in checking connection quality of fiber link during installation.

Link Fault Pass-Through

This feature can force the link to shut down as soon as it notices that the other link has failed. It allows a link partner on one cable segment can notice a link fault occurred on the other segment and give application a chance to react.

Remote TP Port Status Monitoring

When two converters connected with each other via fiber link, the converter can monitor and display the twisted-pair port status of the remote fiber link partner. The status display can be on the local LED indicators or web management interface.

802.1Q Control

With software configuration support, the device is enhanced with more 802.1Q control features for VLAN applications rather than just a typical media converter function.

The optional features include:
- Filtering all untagged packets
- Filtering all tagged packets
- Filtering tagged packets with certain VID
- Packet Tag removal (Untagging)
- Packet Tag insertion (Tagging)

Quality of Service

For conversion between two different speeds, the device is featured with powerful Quality of Service (QoS) function which can classify the priority for received network frames based on the ingress port and frame contents. Furthermore, many service priority policies can be configured for egress operation.

Web Management

The device is embedded with an Http server which provides management functions for advanced network functions including Port Control, Quality of Service, and Virtual LAN functions. The management can be performed via Web browser based interface over TCP/IP network.

1.1 Features

Basic functions
- Provide tri-speed 10/100/1000Mbps copper to dual-speed 100/1000Mbps fiber conversion
- Provide two SFP slots for the fiber port to accommodate Gigabit Ethernet SFP fiber transceiver or Fast Ethernet SFP fiber transceiver respectively when needed.
- Support full wire speed Gigabit copper to fiber conversion
- Support auto-negotiation and auto-MDI/MDI-X detection on copper port

- Copper port auto-negotiation mode, speed and duplex configuration by DIP switch settings
- With optional model, copper port provide PoE+ power source (PSE) function.
- The Link Fault Pass Through function allows link fault status passes through between copper link and fiber link transparently.
- Far End Fault function on fiber port
- Supports 802.3x flow control for full-duplex and backpressure for half-duplex
- Supports loop-back test between two devices over fiber link
- Supports remote twisted-pair status monitoring
- Diversified mounting support: desktop, wall, and optional Din-Rail support
- Support wide range of fiber options : 1000BASE-X rated, 100BASE-FX rated, multimode fiber, single mode fiber (short reach up to long reach), Bi-directional single fiber, and CWDM

Management functions
- Port configuration control and status monitoring
- Support Jumbo frame conversion
- Packet filtering
- 802.1Q Control between two ports
- Quality of Service (QoS) control for packet traffic
- Support IGMP snooping
- Support loop-back test
- Support remote twisted-pair status monitoring
- In-band embedded firmware upgrade function
- Web-based browsing interface

1.2 Product Panels

The following figure illustrates the front panel and rear panel of the device:

Setting Switches

SW

DC IN

DC IN Jack
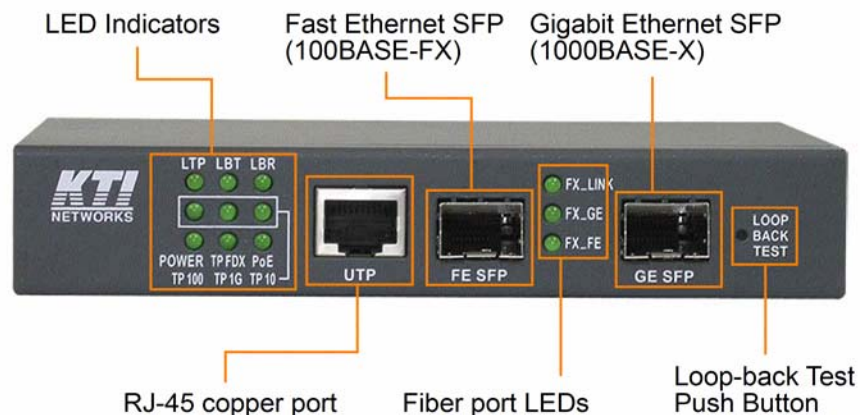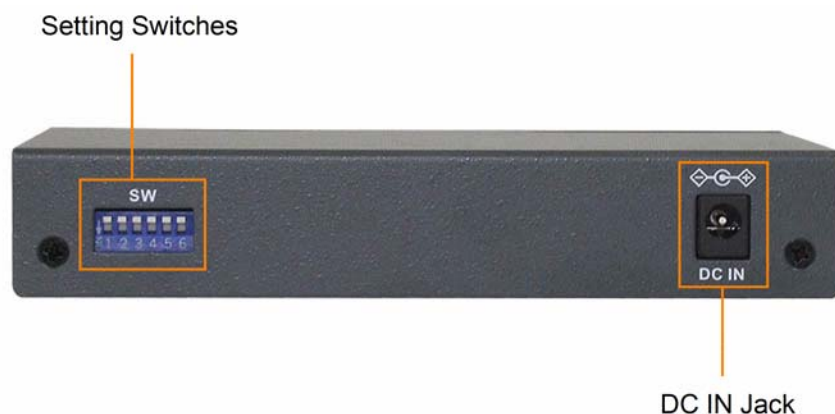
1.3 Specifications

Twisted-pair RJ-45 Copper Port

Compliance	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3u 1000Base-T
Connectors	Shielded RJ-45 jacks
Pin assignments	Auto MDI/MDI-X detection
Configuration	Auto-negotiation, manual settings or software control
Transmission rate	10Mbps, 100Mbps, 1000Mbps
Duplex support	Full/Half duplex
Network cable	Cat.5 UTP

Gigabit Ethernet SFP for Fiber Port

Compliance	IEEE 802.3 1000BASE-X (mini-GBIC)
Connectors	SFP for optional SFP type Gigabit Ethernet fiber transceivers
Configuration	Auto/Forced, 1000Mbps, Full duplex
Transmission rate	1000Mbps
Network cables	MMF 50/125 60/125, SMF 9/125
Eye safety	IEC 825 compliant

Fast Ethernet SFP for Fiber Port

Compliance	IEEE 802.3 100BASE-FX
Connectors	SFP for optional SFP type Gigabit Ethernet fiber transceivers
Configuration	Forced, 100Mbps, Full duplex
Transmission rate	100Mbps
Network cables	MMF 50/125 60/125, SMF 9/125
Eye safety	IEC 825 compliant

Loop-back Test Push Button

LOOPBACK TEST	Push button to start loop-back test

LED Indicators

LTP	Local or remote TP indication on TP LEDs
LBT	Loop-back test in-progress LED
LBR	Loop-back test result LED
TP1G	Twisted-pair copper port 1000Mbps and link status
TP100	Twisted-pair copper port 100Mbps and link status
TP10	Twisted-pair copper port 10Mbps and link status
POWER	Power status
TPFDX	Twisted-pair copper port duplex status
PoE	PoE power output ON

Fiber Port LEDs

FX_LINK	Fiber port link and activity status
FX_GE	Gigabit Ethernet SFP is selected for use.
FX_FE	Fast Ethernet SFP is selected for use.

Configuration DIP Switches

SW1-SW3	Twisted-pair copper port configuration
SW4	Flow control setting
SW5	Remote Twisted-pair copper port monitoring
SW6	Link fault pass through function setting

Basic Functions

MAC Addresses	Support up to 8K
Forwarding technology	Store and forward
Maximum packet length	Jumbo frame support up to 9600 bytes
Flow control	IEEE 802.3x pause frame base for full duplex operation
	Back pressure for half duplex operation

DC Input Jack

Interfaces	DC Jack (-D 6.3mm / + D 2.0mm)
Operating input voltages	+45 ~ +57VDC for PoE applications
	+6.5 ~ +60VDC for non-PoE applications
Power consumption	3.7W max. @7.5V (No PoE)
	4.4W max. @24V (No PoE)
	5.4W max. @56V (No PoE)

37W @56V (Including full PoE output)

Mechanical

Dimension (base)   144 x 104.5 x 26 mm

Housing   Enclosed metal with no fan

Mounting   Desktop mounting, wall mounting, optional Din-rail mounting

Environmental

Operating Temperature   Typical -10°C ~ +50°C

Storage Temperature   -40°C ~ +85°C

Relative Humidity   10% ~ 90%

Electrical Approvals

FCC   Part 15 rule Class A

CE   EMC, CISPR22 Class A

Software Management Functions

Interfaces   Web browser

Management objects   System configuration - IP settings, Name, Password

                          Port configuration control and status

                          802.1Q control settings

                          QoS settings

                          Reboot, restore factory default, Update firmware

1.4 Model Definition

KGC-320-HP	PoE Model	Media converter with PoE+ PSE function
KGC-320	Non-PoE Model	Media converter with no PoE+ PSE function

1.5 Optical Specifications

KGC-320-HP-XXX, KGC-320-XXX (XXX: model extension)

Model Ext.	1000M Fiber	Wavelength (nm)	Tx Power (dBm)	Sensitivity (dBm)	Rx Max. (dBm)	Distance
-SX	LC MMF	850	-9.5 ~ -4	-18	0	50/125μm 500m 62.5/125μm 200m
-LX	LC SMF	1310	-9.5 ~ -3	-20	-3	MMF 550m SMF 10km
-LX20	LC SMF	1310	-8 ~ -2	-23	-1	20km
-LX30	LC SMF	1310	-4 ~ +1	-24	-3	30km
-LX50	LC SMF	1550	-4 ~ +1	-24	-3	50km
-LX70	LC SMF	1550	0 ~ +5	-24	-3	70km
-W3510	LC Bi-Di SMF	Tx 1310 Rx 1550	-9 ~ -3	-21	-1	10km
-W5310	LC Bi-Di SMF	Tx 1550 Rx 1310	-9 ~ -3	-21	-1	10km
-W3520	LC Bi-Di SMF	Tx 1310 Rx 1550	-8 ~ -2	-23	-1	20km
-W5320	LC Bi-Di SMF	Tx 1550 Rx 1310	-8 ~ -2	-23	-1	20km

Model Ext.	100M Fiber	Wavelength (nm)	Tx Power (dBm)	Sensitivity (dBm)	Rx Max. (dBm)	Distance
-M	LC MMF	1310	-20 ~ -14	-31	-8	2km
-SL2	LC SMF	1310	-15 ~ -8	-34	0	20km
-SL6	LC SMF	1310	-5 ~ 0	-35	0	60km
-SL10	LC SMF	1550	-5 ~ 0	-35	0	100km
-FW3520	LC Bi-Di SMF	Tx 1310 Rx 1550	-14 ~ -8	-32	0	20km
-FW5320	LC Bi-Di SMF	Tx 1550 Rx 1310	-14 ~ -8	-32	0	20km

2. Installation

2.1 Unpacking

The product package contains:

◆ The media converter unit

◆ One product CD-ROM

2.2 Safety Cautions

To reduce the risk of bodily injury, electrical shock, fire and damage to the product, observe the following precautions:


● Do not service any product except as explained in your system documentation.

● Opening or removing covers may expose you to electrical shock.

● Only a trained service technician should service components inside these compartments.

● If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:

  ■ The power cable, extension cable, or plug is damaged.

  ■ An object has fallen into the product.

  ■ The product has been exposed to water.

  ■ The product has been dropped or damaged.

  ■ The product does not operate correctly when you follow the operating instructions.

● Do not push any objects into the openings of your system. Doing so can cause fire or electric shock by shorting out interior components.

● Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

2.3 Mounting the Media Converter

The media converter can be mounted on a desktop or shelf or a wall and in a Din-rail enclosure. Make sure that there is proper heat dissipation from and adequate ventilation around the device. Do not place heavy objects on the device.

Wall mounting

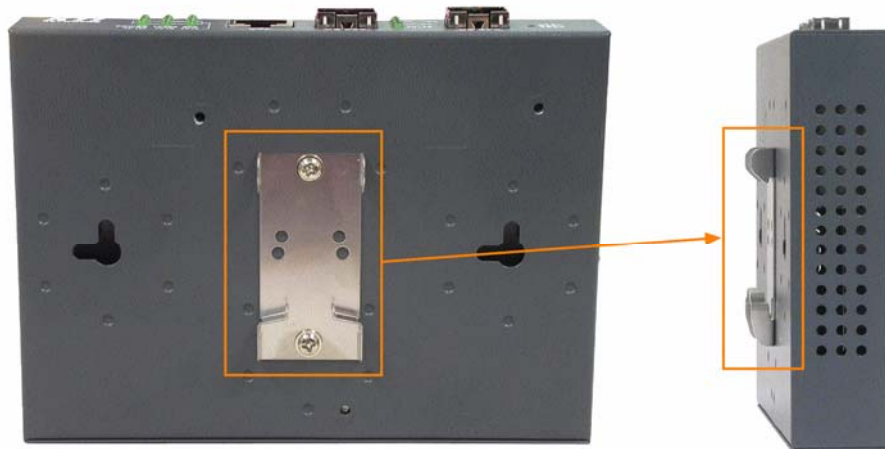The device has one mounting wall on the bottom side to support wall mounting.
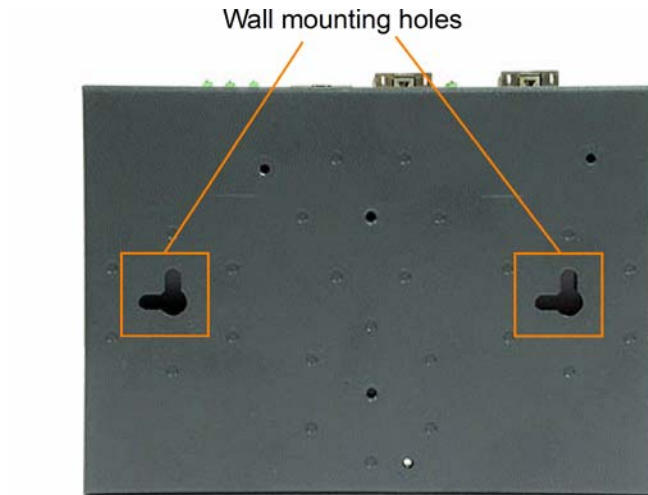
Din-Rail mounting

For a Din-Rail chassis, the device can support mounting on a Din-Rail. An optional Din-Rail mounting kit can be purchased separately as shown below:

The following figure illustrates the converter is installed with Din-Rail mounting bracket:

2.4 Applying Power

Before you begin the installation, check the AC voltage of your area. The AC power adapter which is used to supply the DC power for the unit should have the AC voltage matching the commercial power voltage in your area.

The AC Power Adapter Specifications

Rated input voltage: 100~240 VAC
Rated input frequency: 50/60Hz
Output voltage: 56VDC (+1%/-3%)
Output current: 1.16A max.
Power cord: De-attachable IEC320 AC power cord

Steps to apply the power to the device are:

1. Connect power adapter DC plug to the DC input jack located on the back of the unit before connecting to the AC outlet.
2. Connect the power adapter to the AC outlet.
3. Check Power LED indication.

2.5 Making UTP Connections

The 10/100/1000 twisted-pair copper (TP) port supports the following connection types and distances:

Network Cables

10BASE-T:　　2-pair UTP Cat. 3,4,5 , EIA/TIA-568B 100-ohm

100BASE-TX:　2-pair UTP Cat. 5, EIA/TIA-568B 100-ohm

1000BASE-T:　4-pair UTP Cat. 5 or higher (Cat.5e is recommended), EIA/TIA-568B 100-ohm

Link distance:　Up to 100 meters

Auto MDI/MDI-X Function

This function allows the port to auto-detect the twisted-pair signals and adapts itself to form a valid MDI to MDI-X connection with the remote connected device automatically. No matter a straight through cable or crossover cable is connected, the ports can sense the receiving pair automatically and configure itself to match the rule for MDI to MDI-X connection. It simplifies the cable installation.

Auto-negotiation Function

The port is featured with auto-negotiation function and full capability to support connection to any Ethernet devices. The port performs a negotiation process for the speed and duplex configuration with the connected device automatically when each time a link is being established. If the connected device is also auto-negotiation capable, both devices will come out the best configuration after negotiation process. If the connected device is incapable in auto-negotiation, the port will sense the speed and use half duplex for the connection.

Port Configuration Management

For making proper connection to an auto-negotiation INCAPABLE device, it is suggested to set port configuration to one of non-auto (forced) operating modes and specify speed and duplex mode which match the configuration used by the connected device.

Two methods for setting copper port configuration are as follows:

Model	**Methods**
Unmanaged model	DIP SW (switches) SW1, SW2, SW3
Managed model	DIP SW (switches) SW1, SW2, SW3
	Software management via web interface
	Configuration -> Ports -> TP Mode

2.6 Making Fiber Connection

The fiber (FX) port is equipped with two SFP slots to support dual-speed fiber connectivity. One slot, labeled GE_SFP is used for installing Gigabit Ethernet SFP transceiver for 1000BASE-X connection. The other, labeled FE_SFP is used for installing Fast Ethernet SFP transceiver for 100BASE-FX connection.

Your device unit may come with an SFP transceiver pre-installed when it was delivered.

Installing SFP Fiber Transceiver

To install an SFP fiber transceiver into an SFP slot, the steps are:

1. Turn off the power to the device unit.
2. Insert the SFP fiber transceiver into the SFP slot. Normally, a bail is provided for every SFP transceiver. Hold the bail and make insertion.
3. Until the SFP transceiver is seated securely in the slot, place the bail in lock position.

Connecting Fiber Cables

LC connectors are commonly equipped on most SFP transceiver modules. Identify TX and RX connector before making cable connection. The following figure illustrates a connection example between two fiber ports:
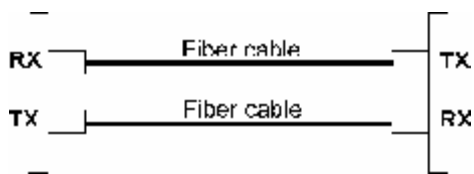
Make sure the RX-to-TX connection rule is followed on the both ends of the fiber cable.

Network Cables

Multimode (MMF) - 50/125, 62.5/125

Single mode (SMF) - 9/125

Fiber Port Configuration

Three modes are available for fiber port configuration:

Auto (GE preference) Auto selection

GE SFP GE_SFP is selected.

FE SFP FE_SFP is selected.

In Auto mode, the system checks two SFP slots automatically. If any is found to have transceiver installed, the slot is used. If both are found with transceivers installed, GE_SFP is selected. The operation configuration of the selected slot is:

Slot selected	Auto-negotiation	Speed	Duplex	Standard
GE_SFP	Yes	1000Mbps	Full	1000BASE-X

FE_SFP   No   100Mbps   Full   100BASE-FX

2.7 Loop-back Test Push Button

The push button is used to perform loop-back test between two media converters connected with fiber cable as shown below:
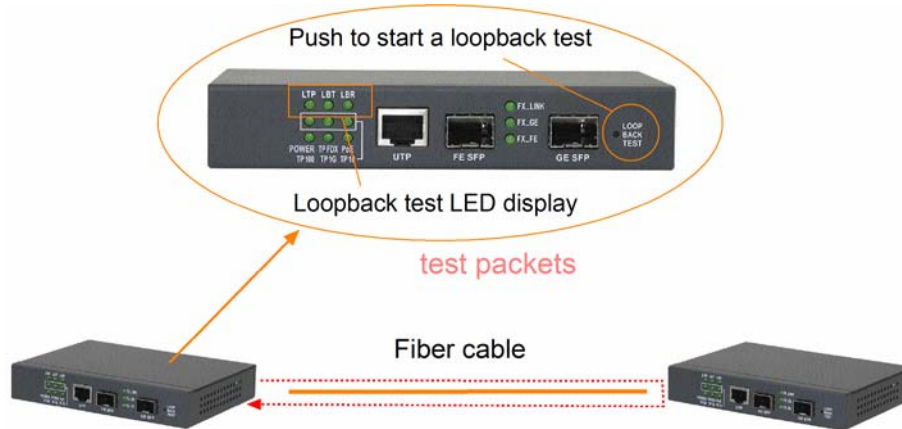
It allows installer to perform diagnostic to the fiber link during installation and check the test result displayed on the LED indicators.

2.7.1 Pressing Button to Restore Factory Default Settings

The button may also be used to restore the software configuration settings to factory default values. The operations are:

Operations	**Functions**
Press the button and release in normal operation	Perform loop-back test over fiber cable
Press the button about 5 seconds when power up	Restore factory default settings

2.8 Configuration DIP SW

The configuration DIP SW (switches) is used for setting operation configuration manually.
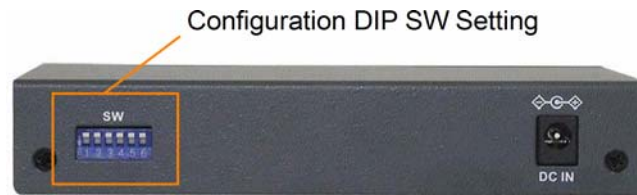
The functions of each DIP SW states are:

SW1	SW2	SW3	SW4	SW5	SW6	Function
OFF	OFF	OFF	-	-	-	Ignore DIP SW6 SW5 SW4 settings (Use software configuration for managed model)
ON	OFF	OFF	-	-	-	Set TP Port in non-auto, 10Mbps, Full duplex mode
OFF	ON	OFF	-	-	-	Set TP Port in non-auto, 10Mbps, Half duplex mode
ON	ON	OFF	-	-	-	Set TP Port in non-auto, 100Mbps, Full duplex mode
OFF	OFF	ON	-	-	-	Set TP Port in non-auto, 100Mbps, Half duplex mode
ON	OFF	ON	-	-	-	Set TP Port in auto, 1000Mbps, Full duplex mode
OFF	ON	ON	-	-	-	Disable TP Port function
ON	ON	ON	-	-	-	Set TP Port in auto, 10/100/1000M, Half/Full duplex
-	-	-	OFF	-	-	Enable flow control
-	-	-	ON	-	-	Disable flow control
-	-	-	-	OFF	-	Disable remote TP status auto-report function
-	-	-	-	ON	-	Enable remote TP status auto-report on TP LEDs
-	-	-	-	-	OFF	Disable Link Fault Pass Through function
-	-	-	-	-	ON	Enable Link Fault Pass Through function

2.9 LED Indication

LED	Function	State	Interpretation
POWER	Power status	ON	The power is supplied to the unit.
		OFF	The power is not supplied to the unit.
LTP	Local TP status *[1]	ON	Local TP port status displayed on TPxxx LEDs
		OFF	Remote TP port status displayed on TPxxx LEDs
		Blink	Fail to display remote TP port status
1: LTP is always ON if remote TP status auto-report function is disabled. When remote TP status auto-report function is enabled, LTP is ON and OFF for ten seconds respectively.			
LBT	Loop-back Test *[2]	Blink	Loop-back Test in operation
		ON	Loop-back Test Result is displayed on LBR LED.
		OFF	Loop-back Test stops.
2: LBT blinks to indicate loop-back test in operation. LBT is ON for 10 seconds to indicate a test result is displayed on LBR.			
LBR	Loop-back test result *[3]	ON	Loop-back Test OK
		Blink	Loop-back Test failed
3: LBR display is valid only when LBT is ON. LBR is displayed for 10 seconds to indicate a loop-back test result.			
TP1G	TP 1000M link status	ON	1000M link is established on TP port.
		OFF	TP port link is down.
TP100	TP 100M link status	ON	100M link is established on TP port.
		OFF	TP port link is down.
TP10	TP 10M link status	ON	10M link is established on TP port.
		OFF	TP port link is down.
TPFDX	TP duplex status	ON	Full duplex on TP port
		OFF	Half duplex on TP port
PoE	PoE power status	ON	PoE power is ON.
		OFF	PoE power is OFF.
FX_LINK	FX port link status	ON	1000M link is established on FX port. (No traffic)
		Blink	Port link is up and there is traffic.
		OFF	FX port link is down.
FX_GE	GE SFP status	ON	GE SFP is selected.
FX_FE	FE SFP status	ON	FE SFP is selected.

2.10 Configuring IP Address and Password for the Device

For managed model, the device unit is shipped with the following factory default settings for software management:

Default IP address of the device: 192.168.0.2 / 255.255.255.0

The IP Address is an identification of the device unit in a TCP/IP network. Each unit should be designated a new and unique IP address in the network. Refer to Web management interface for System Configuration.

The managed device is shipped with factory default password 123 for software management. The password is used for authentication in accessing to the device via web-based interface. For security reason, it is recommended to change the default settings for the device unit before deploying it to your network. Refer to Web management interface for System Configuration.

3. Functions

To help a better understanding about the software management interfaces, this chapter describes some advanced functions provided by the media converter.

3.1 Abbreviation

TP Port:	The twisted-pair copper port of the media converter device.
FX Port:	The optical fiber port of the media converter device.
Ingress Port:	Ingress port is the input port on which a packet is received.
Egress Port:	Egress port is the output port from which a packet is sent out.
IEEE 802.1Q Packets:	A packet which is embedded with a VLAN Tag field
VLAN Tag:	In IEEE 802.1Q packet format, 4-byte tag field is inserted in the original Ethernet frame between the Source Address and Type/Length fields. The tag is composed of:

#of bits	*16*	*3*	*1*	*12*
Frame field	*TPID*	*User priority*	*CFI*	*VID*

TPID:	16-bit field is set to 0x8100 to identify a frame as an IEEE 802.1Q tagged packet
User Priority:	3-bit field refer to the 802.1p priority
CFI:	The Canonical Format Indicator for the MAC address is a 1 bit field.
VID:	VLAN identifier, 12-bit field identifies the VLAN to which the frame belongs to.
Untagged packet:	A standard Ethernet frame with no VLAN Tag field
Priority-tagged packet:	An IEEE 802.1Q packet which VID field value is zero (VID=0)
	In the device, this packet is also treated as untagged packet.
VLAN-Tagged packet:	An IEEE 802.1Q packet which VID field value is not zero (VID<>0)
	PVID (Port VID)
	PVID is the default VID of an ingress port. It is used in 802.1Q filtering for untagged packets. It is also often used as [Default Tag - VID] for egress tagging operation.

3.2 Converter Function

The device supports the following data conversions between fiber cable and twisted-pair Cat.5 (copper) cable:
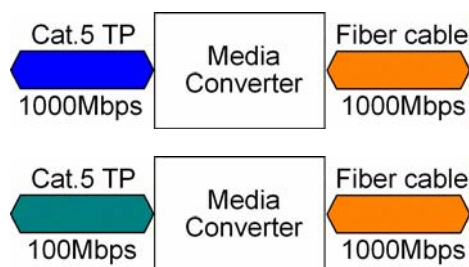
The data rate on twisted-pair segment depends on the link speed finally established with the link partner.

## 3.3 Link Fault Pass Through Function

Description

When the Link Fault Pass Through (LFPT) function is enabled and the media converter detects a link fault on one port segment, it will force the other port segment link down. It looks like that a link fault is passed from one port to the other.

The following example illustrates a link fault occurs on the fiber cable (any one cable in a duplex fiber connection). The link fault is forwarded to both Gigabit link partners finally by LFPT operation of two media converters.
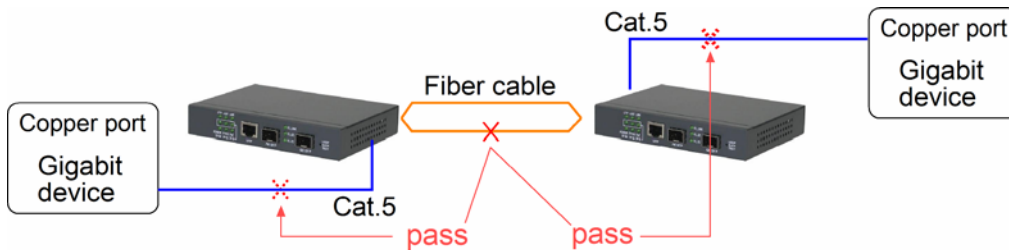
Both Gigabit devices will also detect a link fault on each Cat.5 connection, although the real fault occurs on the fiber connection exactly.

The following example illustrates a real link fault occurs on one Cat.5 and the link fault is passed to the other Cat.5 over two converters and the fiber cable by LFPT operation. Finally, the other link partner also detects a link fault.
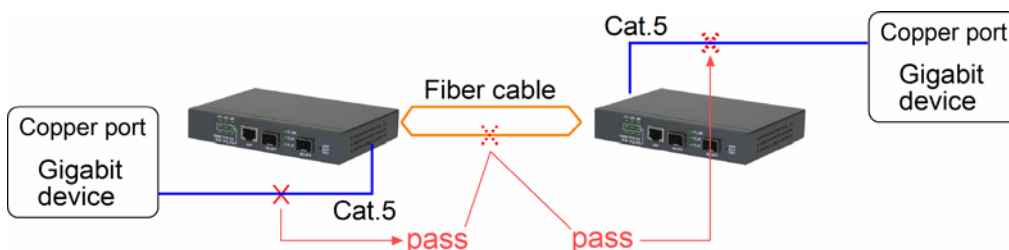
Advantage

The function allows two remote link partners of the media converters detect the link fault finally no matter where the exact fault occurs. It allows the upper application takes necessary action in case a real link fault

occurs in any cable segment.

Methods to enable the function

The LFPT function can be enabled by:

Hardware setting: DIP SW6 is set to ON position

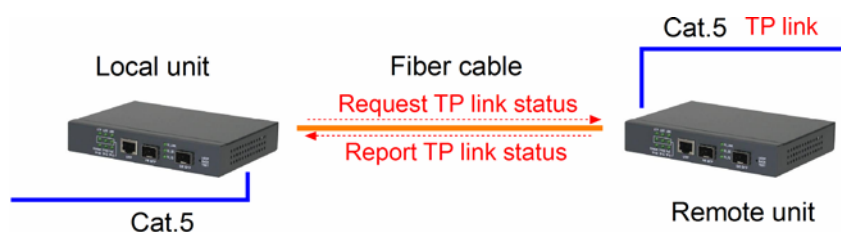**Software setting:**   Web management ->

Configuration -> System -> [Link fault pass through]

3.4 Remote TP Status Monitoring Function

Description

The local media converter can monitor the TP port link status of its remote link partner connected on the fiber cable. The status is displayed on the local LED indicators as follows:

Methods to enable the function

Hardware setting: DIP SW5 is set to ON position

Software setting: Web management ->

Configuration -> System -> [Remote TP auto report]

Remote TP Status Display

1. The status is displayed on local LEDs i.e. TP1G, TP100, TP10, TPFDX when LTP is OFF.

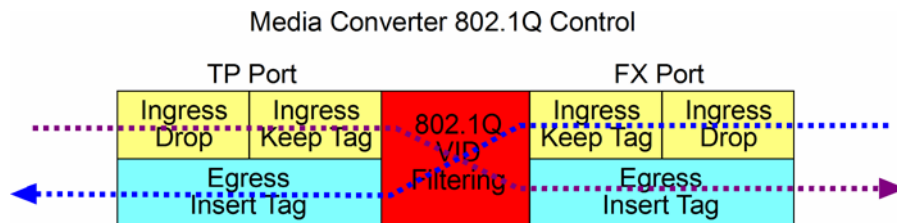| LED	State	Status
LTP	OFF	Remote TP status is valid on the following LEDs
TP1G	ON	Remote TP link in 1000Mbps
	OFF	Remote TP link down
TP100	ON	Remote TP link in 100Mbps
	OFF	Remote TP link down
TP10	ON	Remote TP link in 10Mbps
	OFF	Remote TP link down

TPFDX   ON   Remote TP link in full duplex

          OFF   Remote TP link in half duplex

2. Web management -> Monitoring -> Statistics -> Remote TP [Link]

Port	TP	FX	Remote TP
Link	1000FDX	1000FDX	100FDX
Tx Bytes	543184	2066474	-
Tx Frames	3279	9352	-
Rx Bytes	2500054	69168	-
Rx Frames	12539	707	-
Tx Errors	0	0	-
Rx Errors	0	4	-

3.5 802.1Q Control Function

802.1Q Control function allows perform 802.1Q VLAN related operation to the packets passing through the media converter according packet contents as follows:

Media Converter 802.1Q Control

TP Port				FX Port	
Ingress Drop	Ingress Keep Tag	802.1Q VID Filtering	Ingress Keep Tag	Ingress Drop	
Egress Insert Tag			Egress Insert Tag		

[Ingress Drop] setting
The setting is the first filtering mechanism to filter all incoming untagged packets or to filter all incoming VLAN-tagged packets. The options are:

Disable -   Disable port ingress drop function
Untag Only -   All incoming untagged packets and priority-tagged packets are dropped.
                     Only VLAN-tagged packets are admitted.
Tag Only -   All incoming VLAN-tagged packets are dropped.
                     Only untagged packets and priority-tagged packets are admitted.

[Ingress Keep Tag], [Egress Insert Tag] settings
The settings are used together for packet egress tagging or untagging as table listed below:

Ingress Keep Tag   Egress Insert Tag   Packet Modification

Enable	Disable	All packets are with no modification.
Disable	Disable	All packets are untagged in egress.
Disable	Enable	All packets are tagged in egress.
Enable	Enable	Settings not recommended (possible double-tagging)

[Ingress Keep Tag] options:

Enable - The VLAN tag in the received VLAN-tagged packet will be kept as it is and is not stripped in whole conversion operation.

Disable - The VLAN tag data in the received VLAN-tagged packet is stripped (removed).

[Egress Insert Tag] options:

Enable - Insert a tag into the packet in egress. The tag inserted is based on the rule below:

Incoming Packet Type	**Tag inserted**
Untagged	Ingress port Default Tag
Priority-tagged	Ingress port Default Tag
VLAN-tagged	Received packet own tag

Disable - No tagging is performed.

[Default Tag -VID], [Default Tag - CFI], [Default Tag - Priority] settings

These settings compose one ingress port Default Tag. This tag is used when a tag insertion is required for untagged packets.

802.1Q Filtering

802.1Q VID Filtering function allows to admit or reject certain VID tagged packets. Up to 16 allowed (positive list) or rejected (negative list) VIDs can be configured. This function allows to limit certain packets to pass from one link segment to another one.

[VID Table] options

Disable - 802.1Q VID filtering is disabled.

Allowed VID - Only the VLAN-tagged packets with VIDs in VID table are admitted.

Rejected VID - The VLAN-tagged packets with VIDs in VID table are rejected and dropped.

For untagged and priority-tagged packets, the ingress [Default Tag - VID], also called PVID is used for VID filtering. If it is in Allowed VID table, the untagged packet is allowed to pass; otherwise, dropped. If it is in Rejected VID table, the untagged packet is dropped.

3.6 SNMP Support

The media converter is equipped with SNMP support. It can be managed from remote SNMP manager stations over SNMP protocol.

SNMP version support	SNMP v1, v2c management	
Managed Objects	MIB-II	
	system	OBJECT IDENTIFIER ::= { mib-2 1 }
	interfaces	OBJECT IDENTIFIER ::= { mib-2 2 }
	ip	OBJECT IDENTIFIER ::= { mib-2 4 }
	snmp	OBJECT IDENTIFIER ::= { mib-2 11 }
	dot1dBridge	OBJECT IDENTIFIER ::= { mib-2 17 }
	ifMIB	OBJECT IDENTIFIER ::= { mib-2 31 }
RFC	RFC 3418 - Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)	
	RFC 1907 - Management Information Base for Version 2 of the Simple Network Management Protocol (SNMPv2)	
	RFC 1213 - Management Information Base for Network Management of TCP/IP-based internets:MIB-II	
	RFC 1158 - Management Information Base for network management of TCP/IP-based internets: MIB-II	
	RFC 1493 - Definitions of Managed Objects for Bridges	
	RFC 2863 - The Interfaces Group MIB	
	RFC 1573 - Evolution of the Interfaces Group of MIB-II	
SNMP Trap Support	TRAP_COLDSTART - the device boot up trap	
	TRAP_LINKUP - the port link recovery trap	
	TRAP_LINKDOWN – the port link down trap	

SNMP Settings

The settings are used to configure SNMP function and SNMP trap function.

[SNNP]	Enable / disable SNMP function
[SNNP Trap destination]	The IP address of the target SNMP trap host who is allowed to receive the traps
[SNMP Read community]	The community allowed for the SNMP [get] message
[SNMP Write community]	The community allowed for the SNMP [set] message
[SNMP Write community]	The community used for the SNMP trap messages sent by the device

SNMP trap function allows the device to send trap message to an SNMP trap host over SNMP protocol when the associated trap event occurs.

SNMP Trap events

The following events are defined for generating a trap message when the event occurs on the unit.

● The device boot up.

● TP copper port link down

● TP copper port link up (link recovery).

● FX fiber port link down

● FX fiber port link up (link recovery).

Example of SNMP Trap Event:

The following example illustrates an event of FX port link down occurs and is detected by the device. Then, it generates a trap message to the SNMP trap host PC.
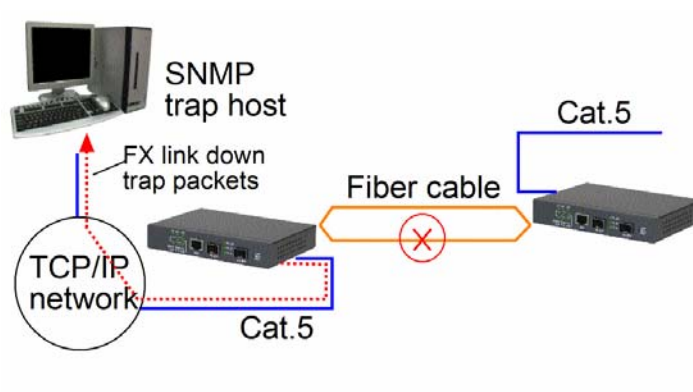
4. Web Management

The media converter features an http server which can serve the management requests coming from any web browser software over TCP/IP network.

Web Browser

Compatible web browser software with JAVA script support

Microsoft Internet Explorer 4.0 or later

Set IP Address for the System Unit

Before the device unit can be managed from web browser software, make sure a unique IP address is configured for the unit.

4.1 Start Browser Software and Making Connection

Start your browser software and enter the IP address of the unit to which you want to connect. The IP address is used as URL for the browser software to search the device.

URL : http://xxx.xxx.xxx.xxx/

Factory default IP address : 192.168.0.2

4.2 Login to the Device Unit

When browser software connects to the device unit successfully, a Login screen is provided for you to login to the device as follows:
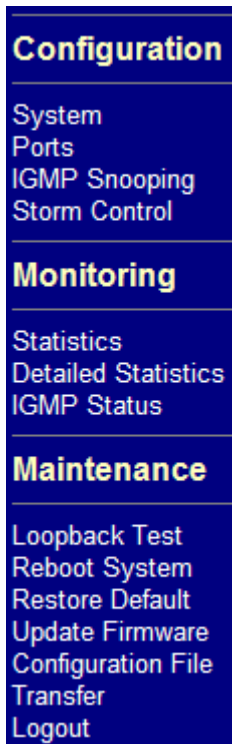
The device will accept only one successful management connection at the same time. The other connection attempts will be prompted with a warning message.

Duplicated Administrator
This device is managed by 192.168.0.102
currently!!

A new connection will be accepted when the current user logout successfully or auto logout by the device due to no access for time out of 3 minutes. System Configuration is displayed after a successful login.

4.3 Main Management Menu

Configuration

System
Ports
IGMP Snooping
Storm Control

Monitoring

Statistics
Detailed Statistics
IGMP Status

Maintenance

Loopback Test
Reboot System
Restore Default
Update Firmware
Configuration File
Transfer
Logout

The following information describes the basic functions of the main menu.

Configuration

System   Device information, system and IP related settings

Ports   Port link status, operation mode configuration and other per port settings

IGMP Snooping   IGMP snooping related configuration

Storm Control   Packet Storm protection control configuration

Monitoring

Statistics   List statistics for the local ports and remote TP port link status

Detailed Statistics List detailed statistics for all ports

IGMP Status   IGMP snooping status

<u>**Maintenance**</u>

Loopback Test   Command to perform loop-back test on fiber link

Reboot System   Command to reboot the device unit

Restore Default   Command to restore the device unit with factory default settings

Update Firmware   Command to update the device firmware

Configuration File Command to transfer (upload/download) configuration file

Transfer

Logout   Command to logout from current web management

4.4 System

System Configuration

MAC Address	00-40-F6-AD-15-68
S/W Version	1.01
H/W Version	1.0
Active IP Address	192.168.0.210
Active Subnet Mask	255.255.255.0
Active Gateway	192.168.0.1
DHCP Server	0.0.0.0
Lease Time Left	0 secs

DHCP Enabled	☐
Fallback IP Address	192.168.0.210
Fallback Subnet Mask	255.255.255.0
Fallback Gateway	192.168.0.1
Management VLAN	VID: 0 CFI: 0 User Priority: 0
Name	
Password	•••
Inactivity Timeout (secs)	300
SNMP enabled	☑
SNMP Trap destination	0.0.0.0
SNMP Read Community	public
SNMP Write Community	private
SNMP Trap Community	public

802.1Q Control	○ Enable ◉ Disable
Jumbo Mode	○ Enable ◉ Disable
Link fault pass through	○ Enable ◉ Disable
Remote TP auto report	○ Enable ◉ Disable
Power Saving Mode	◉ Enable ○ Disable

Apply   Refresh

Configuration	Description
MAC Address	The MAC address factory configured for the switch. It can not be changed in any cases.
S/W Version	The firmware version currently running
H/W Version	The hardware version currently operating
Active IP Address	Currently used IP address for the switch management
Active Subnet Mask	Currently used subnet mask for IP address for the switch management
Active Gateway	Currently used gateway IP address for the switch management
DHCP Server	Current IP address of the DHCP server
Lease Time Left	The time left for the lease IP address currently used

DHCP Enabled	Use DHCP to get dynamic IP address configuration for the device
Fallback IP Address	IP address used when DHCP mode is not enabled
Fallback Subnet Mask	Subnet mask for IP address used when DHCP mode is not enabled
Fallback Gateway	Default gateway IP address used when DHCP mode is not enabled
Management VLAN	Set management VLAN information (See next section)
	- VID VLAN ID configured for web management to the device
	- CFI CFI value for web reply packets from the device
	- User priority Priority value for web reply packets from the device
Name	Set the system name for this switch unit
	Note: It is suggested to give each device unit a system name as an alternative unique identification beside IP address.
Password	Set new password
Inactivity Timeout	Timeout for auto logout (unit: second)
SNMP enabled	Enable SNMP agent
SNMP Trap destination	The IP address of the SNMP trap manager
SNMP Read community	The community allowed for the SNMP [get] message
SNMP Write community	The community allowed for the SNMP [set] message
SNMP Trap community	The community used for the SNMP trap messages sent by the switch
802.1Q Control	802.1Q Control function main configuration
	Disable - all packets are allowed to pass with no 802.1Q control.
	Enable - 802.1Q control mechanism is activated for the conversion.
Jumbo Mode	Enable / disable Jumbo mode to support jumbo packets
	Disable - support maximum packet size up to 1526 bytes
	Enable - support maximum packet size up to 8000 bytes
Link fault pass through	Enable / disable link fault pass through function
Remote TP auto report	Enable / disable remote TP port link status function
Power Saving Mode	Enable / disable power saving function
Apply	Click to apply the changes.
Refresh	Click to refresh the page. Any changes made locally will be undone.

4.4.1 Management VLAN

Management VLAN settings allow administrator to access the device and perform the web management over a dedicated VLAN only.

The following rules are applied with the Management VLAN:

1. If the 802.1Q Control function is disabled, Management VLAN settings are ignored and no VLAN limitation is applied in accessing the web management interface. The http server only accepts untagged management packets and replies untagged packets to the management host.
2. If [Management VLAN - VID] setting is zero, no VLAN limitation is applied in accessing the web management interface. The http server only accepts untagged management packets and replies untagged packets to the management host.
3. If [Management VLAN - VID] setting is not zero, the http server only accepts tagged management packets matched [Management VLAN -VID] and replies tagged packets with tag composed of [Management VLAN] VID, CFI and User Priority settings to the management host.

Summary of the rules:

802.1Q Control	Management VLAN VID	Embedded Http (Web) Server operation
Disabled	Ignore	Accept untagged web packets
		Reply untagged packets
Enabled	VID=0	Accept untagged web packets
		Reply untagged packets
Enabled	VID<>0	Accept matched tagged web packets only
	(1 ~ 4095)	Reply tagged packets with the configured tag

Notes:
1. *No matter how management VLAN is configured, login password authentication is still required.*
2. *Default [Management VLAN - VID] is equal to zero. It is allowed to access the device from any untagged PC web browser.*
3. *Most of the PCs are tag-incapable for LAN access. Be sure the rules are followed before setting [Management VLAN - VID] not equal to zero.*

4.5 Ports

Port Configuration

Port	UTP	SFP
Link	1000FDX	Down
Mode	Auto	Auto (GE Preference)
Flow Control	☑	☑
PoE	Enable	--

Apply   Refresh

802.1Q Control

Port	UTP	SFP
Ingress Drop	Disable	Disable
Ingress Keep Tag	Enable	Enable
Egress Insert Tag	Disable	Disable
Default Tag - VID(PVID)	1	1
Default Tag - CFI	0	0
Default Tag - Prority	0	0
802.1Q Filtering	Setting	

Apply   Refresh

Ports Configuration has three major parts as follows:

● Port Configuration Port link status, port operating mode, port flow control and PoE function

● 802.1Q Control 802.1Q Control per port settings

Port Configuration	Function
Port	UTP - Twisted-Pair copper port, SFP - Fiber port
Link	Port link status
	Speed and duplex status with green background - port is link on
	Down with red background - port is link down
Mode	Select port operating mode
	Disabled - disable the port operation

UTP Mode	Auto-negotiation	Speed capability	Duplex capability
Disable	Disable port operation		
Auto	Enable	10, 100, 1000M	Full, Half
10 Half	Disable	10M	Half

-35-

10 Full	Disable	10M	Full
100 Half	Disable	100M	Half
100 Full	Disable	100M	Full
1000 Full	Enable	1000M	Full
FX Mode	**Auto-negotiation**	**Speed capability**	**Duplex capability**
Disable - Disable port operation			
Auto (GE preference) –	Auto-selection for GE SFP or FE SFP by detection of the slot which was installed with SFP transceiver. GE SFP is preferred when both slots are detected with SFP transceiver.		
GE SFP	Enable	1000M	Full
FE SFP	Disable	100M	Full

Flow Control	Set port flow control function
	V - check to enable 802.3x pause flow control for ingress and egress
PoE	*Enable* – Enable PoE PSE function
	Disable – Disable PoE PSE function

Apply	Click to apply the changes.
Refresh	Click to refresh the page. Any changes made locally will be undone.

802.1Q Control	**Function**
Ingress Drop	*Disable* - disable port ingress drop and admit all packet types
	Untag Only - Drop both untagged and priority-tagged packets
	Tag Only - Drop VLAN-tagged packets (VID<>0)
Ingress Keep Tag	Tag is removed from the received packet if it exists.
	Enable - set to activate tag removal for VLAN-tagged packets
	Disable - set to disable tag removal function
Egress Insert Tag	Tag is inserted into the outgoing packet in egress operation.
	Enable - set to activate tagging
	Disable - set to disable tagging function
Default Tag - VID	Port VID, VID for Ingress Default Tag
	1 ~ 4095 - decimal 12-bit VID value
Default Tag - CFI	CFI for Ingress Default Tag
	0, 1 - 1-bit CFI value
Default Tag -Priority	User priority for Ingress Default Tag
	0 ~ 7 - decimal 3-bit value

802.1Q Filtering	Click to set VID filtering table.
Apply	Click to apply the changes.

Refresh	Click to refresh the page. Any changes made locally will be undone.

4.5.1 802.1Q Filtering

802.1Q Filtering

VID TABLE: [Disable ▾]

No.	VID		No.	VID
1	1		9	0
2	0		10	0
3	0		11	0
4	0		12	0
5	0		13	0
6	0		14	0
7	0		15	0
8	0		16	0

[Apply] [Refresh] [Back]

Configuration	Description
VID TABLE	Specify the characteristic of the VID table.
	Disable - set to disable 802.1Q filtering function.
	Allowed VID - the VID table specifies the allowed VIDs
	Rejected VID - the VID table specifies the rejected VIDs
No.	Entry of VID table - up to 16 VIDs can be configured in VID table
VID	*1 ~ 4095* - decimal 12-bit VID value
Apply	Click to apply the changes.
Refresh	Click to refresh the page. Any changes made locally will be undone.
Back	Click to go back to previous page.

Notes:

1. *VID table is referred for filtering VLAN-tagged packets according to the VID value embedded in the packet. For untagged or priority-tagged packet, [Default Tag - VID], also called PVID is used instead in referring VID table.*

2. *[Allowed VID] setting is useful when only certain VIDs are allowed to pass the device.*

3. [Rejected VID] setting is useful when only certain VIDs are not allowed to pass the device.

4.6 IGMP Snooping

IGMP Configuration

IGMP Enabled	☐
Router Ports	UTP ☐ SFP ☐
Unregistered IPMC Flooding enabled	☑

VLAN ID	IGMP Snooping Enabled	IGMP Querying Enabled
1	☑	☑

Apply | Refresh

Configuration	Description
IGMP Enabled	Check to enable global IGMP snooping.
Router Ports	Specify which ports have multicast router connected and require being forwarding IPMC packets unconditionally.
Unregistered IPMC Flooding enabled	Check to drop all unregistered IPMC packets.
VLAN ID	List of current existing VLANs
IGMP Snooping Enabled	Check to enable IGMP snooping on the associated VLAN.
IGMP Querying Enabled	Check to enable IGMP querying on the associated VLAN.
Apply	Click to apply the changes.
Refresh	Click to refresh the page. Any changes made locally will be undone.

4.7 Storm Control

Storm Control Configuration

Storm Control Number of frames per second	
Broadcast Rate	No Limit ▼
Multicast Rate	No Limit ▼
Flooded unicast Rate	No Limit ▼

[Apply] [Refresh]

Configuration	Description
Broadcast Rate	The rate limit of the broadcast packets transmitted on a port.
Multicast Rate	The rate limit of the Multicast packets transmitted on a port.
Flooded Unicast Rate	The rate limit of the flooded unicast packets transmitted on a port. The flooded unicast packets are those unicast packets whose destination address is not learned in the MAC address table.
Apply	Click to apply the changes.
Refresh	Click to refresh the page. Any changes made locally will be undone.

Notes:

1. The unit of the rates is pps (packets per second).

2. No Limit - no protection control

4.8 Statistics

Statistics for all ports

[Clear] [Refresh]

Port	UTP	SFP	Remote TP
Link	1000FDX	Down	Down
Tx Bytes	198173	0	-
Tx Frames	716	0	-
Rx Bytes	79922937	0	-
Rx Frames	535976	0	-
Tx Errors	0	0	-
Rx Errors	0	0	-

Configuration	Description
Port	UTP - Twisted-Pair copper port on local unit
	SFP - Fiber port on local unit
	Remote TP - TP port of the remote unit connected on the fiber link
Link	Port link status
	Speed and duplex status with green background - port is link on
	Down with red background - port is link down
Tx Bytes	Total of bytes transmitted on the port
Tx Frames	Total of packet frames transmitted on the port
Rx Bytes	Total of bytes received on the port
Rx Frames	Total of packet frames received on the port
Tx Errors	Total of error packet frames transmitted on the port
Rx Errors	Total of error packet frames received on the port
[Apply]	Click to reset all statistic counters.
[Refresh]	Click to refresh all statistic counters.

Note: Remote TP status is displayed always no matter how SW5 is configured.

4.9 Detailed Statistics

| Clear | Refresh | | | UTP | SFP |

Receive Total		Transmit Total	
Rx Packets	538915	Tx Packets	739
Rx Octets	80373361	Tx Octets	210319
Rx High Priority Packets	-	Tx High Priority Packets	-
Rx Low Priority Packets	-	Tx Low Priority Packets	-
Rx Broadcast	-	Tx Broadcast	-
Rx Multicast	-	Tx Multicast	-
Rx Broad- and Multicast	536832	Tx Broad- and Multicast	0
Rx Error Packets	0	Tx Error Packets	0
Receive Size Counters		**Transmit Size Counters**	
Rx 64 Bytes	-	Tx 64 Bytes	-
Rx 65-127 Bytes	-	Tx 65-127 Bytes	-
Rx 128-255 Bytes	-	Tx 128-255 Bytes	-
Rx 256-511 Bytes	-	Tx 256-511 Bytes	-
Rx 512-1023 Bytes	-	Tx 512-1023 Bytes	-
Rx 1024- Bytes	-	Tx 1024- Bytes	-
Receive Error Counters		**Transmit Error Counters**	
Rx CRC/Aligment	-	Tx Collisions	-
Rx Undersize	-	Tx Drops	-
Rx Oversize	-	Tx Overflow	-
Rx Fragments	-		
Rx Jabber	-		
Rx Drops	-		

Button	Description
UTP	Click to display all statistic counters of UTP port.
SFP	Click to display all statistic counters of Fiber port.
Clear	Click to reset all statistic counters.
Refresh	Click to refresh the displayed statistic counters.

4.10 IGMP Status

IGMP Status

VLAN ID	Querier	Queries transmitted	Queries received	v1 Reports	v2 Reports	v3 Reports	v2 Leaves
1	Idle	0	89	0	474	4	0

Refresh

Member Groups

VLAN ID	Groups	Port Members
1	224.0.1.60	1
1	239.255.255.250	1
1	224.0.0.251	1
1	224.0.0.252	1
1	224.0.1.22	1

Status	Description
VLAN ID	The VLAN ID of the entry.
Querier Status	Show the Querier status is "Active" or "Idle".
Queries transmitted	The number of Transmitted Queries.
Queries Received	The number of Received Queries.
V1 Reports	The number of Received V1 Reports.
V2 Reports	The number of Received V2 Reports.
V3 Reports	The number of Received V3 Reports.
V2 Leave	The number of Received V2 Leave.
Refresh	Click to refresh the page.

Group Member Status	Description
VLAN ID	The VLAN where the groups found
Groups	IPMC group (IP) found on the VLAN
Port Members	Port members found of the group (1: UTP port, 2: Fiber port)

4.11 Loopback Test

Loopback Test

Are you sure you want to perform Loopback Test? Yes No

This menu is used to start a loopback test operation with the link partner unit over the fiber link. The message displayed during test is:

Loopback Test

TESTING NOW : 10 %

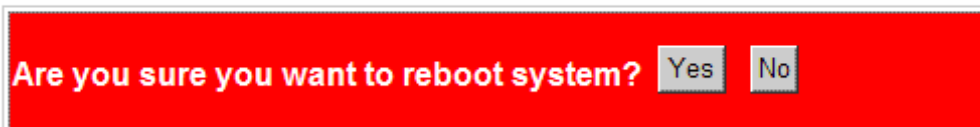The result message displayed after a test finished is:

Loopback Test

TESTING RESULT : OK!!

The test result is also displayed on LEDs - LBT and LBR.

4.12 Reboot System

Reboot System

Are you sure you want to reboot system? Yes No
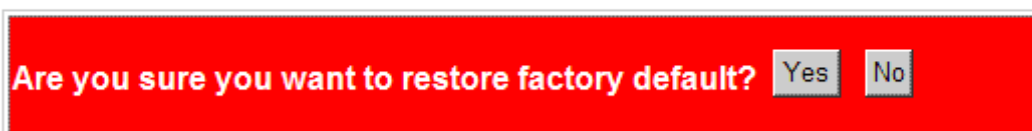
This menu is used to reboot the device unit remotely with current configuration. Starting this menu will make your current http connection lost. You must rebuild the connection to perform any management operation to the unit.

4.13 Restore Default

Restore Default

Are you sure you want to restore factory default? Yes No

This menu is used to restore all settings of the device unit with factory default values. Note that this menu might change the current IP address of the device and make your current http connection lost.

4.14 Update Firmware

Update Firmware

	瀏覽...

Upload

This menu is used to perform in-band firmware (software) upgrade. Enter the path and file name of new firmware image file for uploading.

Configuration	Description
Filename	Path and filename (warp format)
Browser	Click to browse your computer file system for the firmware image file.
Upload	Click to start upload.

4.15 Configuration File Transfer

Configuration Upload

Upload

Configuration Download

Download

This [download] command can be used to backup current switch configuration and download it to the connected management PC using default filename, switch.cfg.

Configuration	Description
Filename Path and filename of a backup configuration file to be uploaded	
Browse	Click to browse your computer file system for the configuration file
Upload	Click to start upload operation from the connected PC to the switch
Download	Click to start download operation from the switch to the connected PC

4.16 Logout

Logout

Are you sure you want to logout? Yes No

This menu is used to perform a logout from the web management. If current user does not perform any management operation over 3 minutes, the device will execute an auto logout and abort the current connection.

Appendix A. Factory Default Settings

Configuration DIP SW	Unmanaged Model	Managed Model
SW3 SW2 SW1	ON ON ON	OFF OFF OFF
	Auto,10/100/100,Full/Half	Web configuration (SW4-6 ignored)
SW4	OFF (Enable flow control)	OFF
SW5	OFF (Disable remote TP auto report)	OFF
SW6	OFF (Disable link fault pass through)	OFF

System	Configuration
DHCP Enabled	*Not select (disabled)*
Fallback IP Address	*192.168.0.2*
Fallback IP Subnet mask	*255.255.255.0*
Fallback Gateway IP	*192.168.0.1*
Management VLAN - VID	*0*
Management VLAN - CFI	*0*
Management VLAN - User priority	*0*
Name	*Null*
Password	*123*
Inactivity Timeout (secs)	*300*
SNMP enabled	*Not select (disabled)*
SNMP Trap destination	*0.0.0.0*
SNMP Read community	*public*
SNMP Write community	*private*
SNMP Trap community	*public*
802.1Q Control	*Disable*
QoS Control	*Disable*
Jumbo Mode	*Disable*
Link fault pass through	*Disable*
Remote TP auto report	*Disable*
Power Saving Mode	*Disable*

Ports	Configuration
Mode	*Auto* for UTP port, *1000 Full* for Fiber port
Flow Control	*v* : Enable

PoE	*Enable* for PoE model
Ingress Drop	*Disable*
Ingress Keep Tag	*Enable*
Egress Insert Tag	*Disable*
Default Tag - VID (PVID)	*1*
Default Tag - CFI	*0*
Default Tag - Priority	*0*

802.1Q Filtering	Configuration
VID TABLE	*Disable*
VID n (n=1-16)	*0*