KTGC-221

Managed

10Gigabit Ethernet Media Converter

Installation Guide

For more information, contact:

United States   KTI Networks Inc.
P.O. BOX 631008
Houston, Texas 77263-1008

Phone: 713-2663891
Fax: 713-2663893
E-mail: kti@ktinet.com
URL: http://www.ktinet.com/

International   Fax: 886-2-26983873
E-mail: kti@ktinet.com.tw
URL: http://www.ktinet.com.tw/

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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

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EMC Class A

EN 55032 CISPR 32 Class A

EN 55024 CISPR 24

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Table of Contents

1. Introduction

The device is a web smart 10Gigabit Ethernet media converter series which provide the following features:

Data Conversion between different media types and speed rates

The media converter supports the following conversions:

- 10Gbps (10GBASE-T) copper to/from 10Gbps (10GBASE-R) fiber
- 5Gbps (5GBASE-T) copper to/from 5Gbps (5GBASE-R) fiber
- 2.5Gbps (2.5GBASE-T) copper to/from 2.5Gbps (2500BASE-X) fiber
- 1Gbps (1000BASE-T) copper to/from 1Gbps (1000BASE-X) fiber

Multi-rate Fiber Connectivity

The converter is featured with one SFP+ slot that can be installed with variety of optional transceivers supporting multiple data rates, 10G/5G/2.5G/1G over multimode or single mode fiber for short reach up to long reach distance.

1.1 Features

- The device supports the following multi-rate and media conversion:
    - 10GBASE-T to 10GBASE-R conversion
    - 5GBASE-T to 5GBASE-R conversion
    - 2.5GBASE-T to 2500BASE-X conversion
    - 1000BASE-T copper to 1000BASE-X fiber conversion
- Full wire speed conversion and no packet length limitation
- Jumbo frame support
- Protocol transparent conversion
- The copper port supports auto-negotiation and provides auto-MDI/MDI-X function and polarity reverse correction function.
- Web-based management for configuration, port status and port test

- SNMP management support

- Digital Diagnostics Monitoring (DDM) function on fiber port

- IEEE 802.3az Energy Efficient Ethernet support (EEE)

- Supports desktop, wall, and Din-rail mounting

Management functions
- Port configuration control and status monitoring
- In-band embedded firmware upgrade function
- Web-based browsing interface
- SNMP and trap managed

1.2 Product Panels

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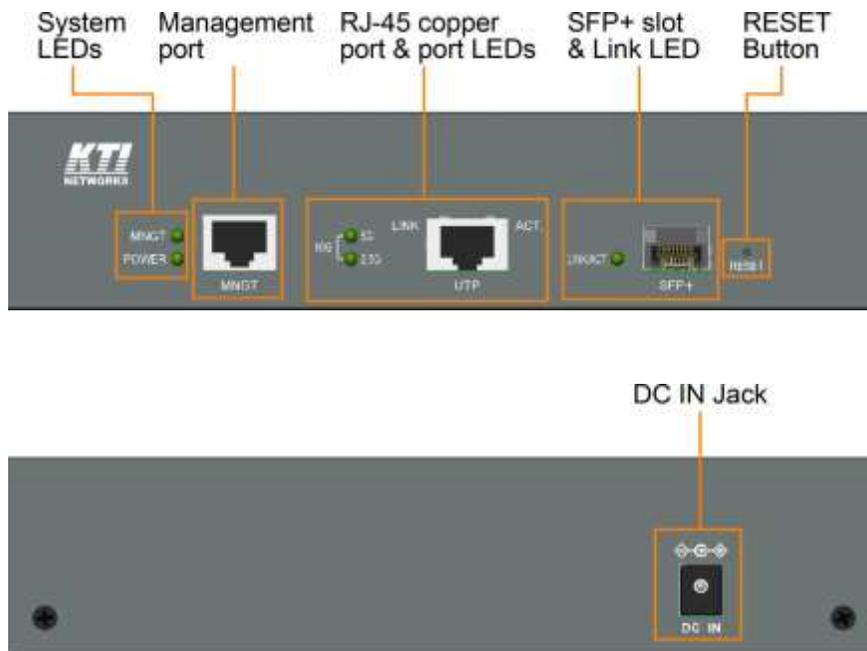
1.3 Specifications

RJ-45 Copper Port

Compliance	IEEE 802.3an 10GBASE-T, IEEE802.3bz 2.5/5GBASE-T, IEEE 802.3u 1000BASE-T
Connector	Shielded RJ-45 jack
Pin assignments	Auto MDI/MDI-X detection
Configuration	Auto-negotiation, or forced by software control

Transmission rates	10Gbps, 5Gbps, 2.5Gbps, 1000Mbps
Duplex support	Full/Half duplex
Network cable	10GBase-T Cat.6a UTP or better up to 100m
	5GBase-T Cat.6 UTP or better up to 100m
	2.5GBase-T Cat.5e UTP or better up to 100m
	1000Base-T Cat.5 UTP or better up to 100m

SFP+ Slot

Compliance	IEEE 802.3ae 10GBASE-R
	5GBASE-R, 2500BASE-X
	IEEE 802.3z 1000BASE-X
Connectors	SFP+ slot supports optional Gigabit fiber transceivers, 1 meter of Direct Attach Cable (DAC) and Active Optical Cable (AOC)
Configuration	Auto-negotiated line rate or forced line rate, Full duplex
Transmission rate	10Gbps, 5Gbps, 2.5Gbps, 1000Mbps
Network cables	MMF 50/125μm 60/125μm, SMF 9/125μm
Eye safety	IEC 825 compliant

RESET Switch

Functions	Reset device, Restore factory default

LED Indicators

POWER	Power status
MNGT	Management status
10G/5G/2.5G	Line rate indication
LINK	RJ-45 copper port link status
ACT.	RJ-45 copper port activity status
LINK/ACT.	SFP+ fiber port link and activity status

DC Input Jack

Interfaces	DC Jack (-D 6.3mm / + D 2.0mm)
Operating input voltages	+12 ~ +48VDC
Power consumption	9W max.
Polarity reversal	Shutdown protection

Mechanical

Dimension (base)	190 x 140 x 43 mm

Housing	Enclosed metal with no fan
Mounting	Desktop mounting, wall mounting, optional Din-rail mounting

Environmental

Operating Temperature	Typical -40°C ~ +55°C
Storage Temperature	-40°C ~ +85°C
Relative Humidity	10% ~ 90%

Electrical Approvals

FCC	Part 15 rule Class A
CE	EMC, CISPR32 Class A
VCCI	Class A
Safety	LVD, IEC 62368-1, EN 62368-1

Software Management Functions

Interfaces	Web browser, SNMP, SNMP traps
Management objects	System configuration - IP settings, Name, Password
	Port configuration control and status
	Statistics, Fiber port DDM
	Ping, Reboot, Restore factory default, Update firmware

2. Installation

2.1 Unpacking

The product package contains:

- The device unit

- One AC power adapter

- QR code label linking to product documentation cloud

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 device can be mounted on a desktop or shelf or a wall. 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. The holes support two different mounting directions.
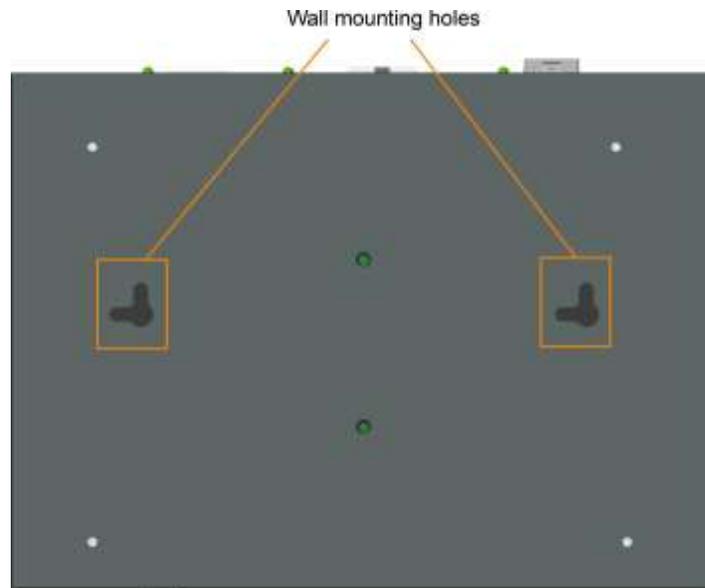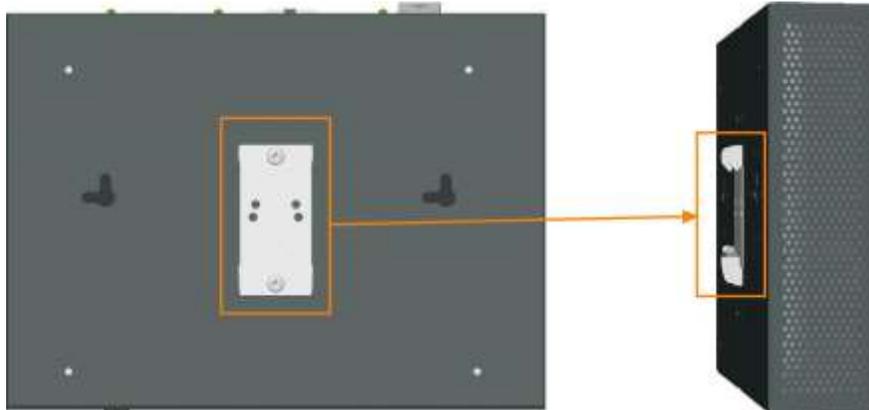

Din-Rail mounting

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

Device DC Input Jack

Interface: DC Jack (-D 6.3mm / + D 2.0mm)

Operating input voltages: +12 ~ +48VDC

Power consumption: 9W max.

Polarity reversal: Shutdown protection

Bundled AC Power Adapter

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

Specifications

Rated input voltage: 100~240 VAC

Rated input frequency: 50/60Hz

Rated output voltage: 12VDC (±5%)

Line regulation: ±2%

Rated power: 12W

Output current: 1A max.

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 RJ-45 Copper Port Connection

The balanced twisted-pair copper (TP) port supports the following connection types and distances:

Network Cables

10GBASE-T:	4-pair UTP Cat. 6a or better, EIA/TIA-568B 100-ohm
5GBAST-T:	4-pair UTP Cat. 6 or better, EIA/TIA-568B 100-ohm
2.5GBAST-T:	4-pair UTP Cat. 5e or better, EIA/TIA-568B 100-ohm
1000BASE-T:	4-pair UTP Cat. 5 or better (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.

Conversion Line Rate

After auto-negotiation, the negotiated speed is as the line rate for conversion between RJ-45 copper port and SFP+ fiber port.

2.6 Making SFP+ Fiber Connection

The fiber port is equipped with one SFP+ slot that can be installed with a matched fiber transceiver in order to support different line rates of fiber connectivity. 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:
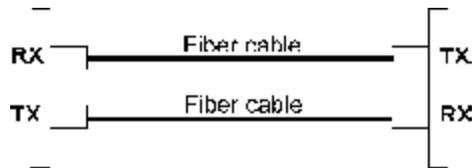
Make sure the RX-to-TX connection rule is followed on the both ends of the fiber cable.

Network Cables

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

Single mode (SMF) - 9/125μm

Fiber Port Configuration

According to the speed negotiated by the copper port with the connected partner, the SFP+ fiber port uses the same speed as the operating line rate for packet forwarding between copper port and fiber port automatically.

Line Rate	RJ-45 Copper Port Interface	SFP+ Fiber Port Interface
10Gbps	10GBASE-T std.	10GBASE-R std.
5Gbps	5GBASE-T std.	5GBASE-R *[1]
2.5Gbps	2.5GBASE-T std.	2500BASE-X *[2]
1000Mbps	1000BASE-T std.	1000BASE-X std. *[3]

*1- Not industrial standard, only the connection between two converters is guaranteed

*2- Not industrial standard, only the connection between two converters is guaranteed

*3- Only forced mode is supported. Auto-negotiation at the link partner's end should be disabled.

2.6.1 Optional 10G SFP+ Transceivers

Part No.	Wavelength	Tx power (dBm)	Rx Sensitivity (dBm)	Fiber cable	Connector	Operating temperature	DDM support
SFP-10G-SR-A	850nm	-7.1 ~ -1	-9.9	MMF *	LC	-10 ~ +70℃	√
SFP-10G-LR-A	1310nm	-6 ~ 0.5	-14.4	SMF 10km	LC	-10 ~ +70℃	√
SFP-10G-ER-A	1550nm	-4.7 ~ 4	-15.8	SMF 40km	LC	0 ~ +70℃	√
SFP-10G-ZR-A	1550nm	0 ~ 4	-23	SMF 80km	LC	0 ~ +70℃	√

* MMF Support distance

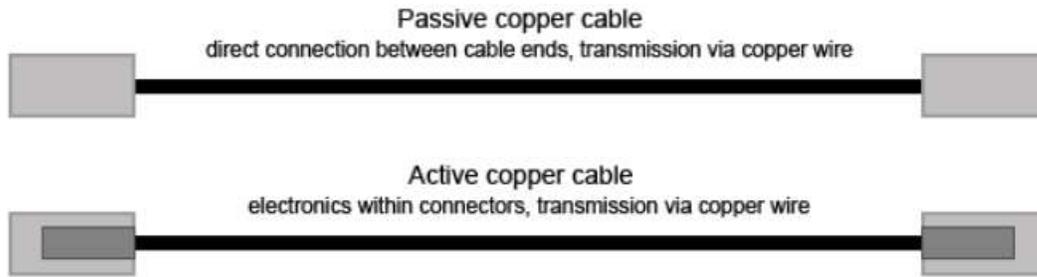| Category	Core	Distance
OM1	62.5μm	2 ~ 33m
OM2	50μm	2 ~ 82m
OM3		2 ~ 300m
OM4		2 ~ 400m

2.7 Making SFP+ DAC/AOC Connection

The SFP+ lot can also support short reach connections with DAC cable or AOC cables between two converters.

Direct Attach Cable (DAC)

DAC cables are made from copper and are factory terminated copper/twinax cables. DAC cables are used to connect switches, routers and servers. They're assembled from shielded copper cables with a fixed length and are fitted with transceivers on either end of the cable with gauges attached. These can be from 24 up to 30 AWG, while 15 meters of interconnection is possible via the copper cable. There are passive and active types of DAC cables. Active copper wires use electronics to connect via the connections and transmissions are made via the copper ends. To put it simply, passive DAC cables do not contain any components that are electrical, minimizing power usage. Active cables benefit from boosted signals and use more power but ensure better quality transmissions.

The SFP+ Passive DAC cable is a high-performance, cost effective solutions for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ Passive DAC cable enables hardware manufacturers and data center operators to achieve high port density, configurability and utilization at a very low cost and with reduced power requirements.

Passive copper cable
direct connection between cable ends, transmission via copper wire

Active copper cable
electronics within connectors, transmission via copper wire

Active Optical Cable (AOC)

AOC is one of the forms of DAC cable. It integrates multimode optical fiber, fiber optic transceivers, and modules. AOCs have many benefits such as lighter weight, high performance, low power consumption, low interconnection loss, EMI immunity, and flexibility etc. Primarily, active optical cable (AOC) assemblies were invented to replace copper technology in data centers and high performance computing (HPC) applications. As we know, copper passive twinax cable is heavy and bulky, making it difficult to physically manage the datacenter. And due to the nature of electrical signals, electromagnetic interference (EMI) limits copper's performance and reliability.

Active optical cable
electronics and optics within connectors, transmission via fiber
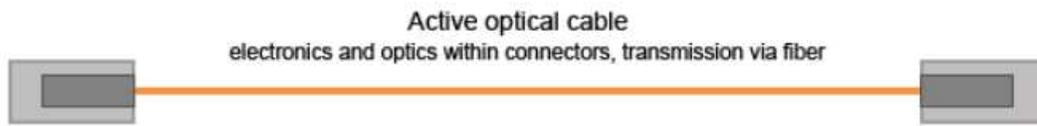
2.8 Making Management Connection

The device is featured to support web-based management and SNMP management. Use Cat.5 cable and connect the management port to a TCP/IP network where the web management host and SNMP host are located. The following figure illustrates a typical connection:
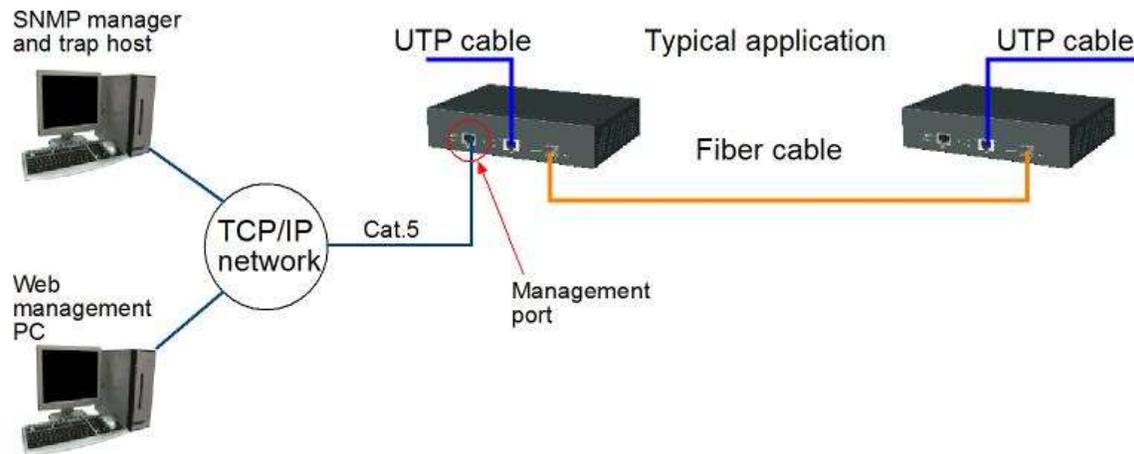
2.9 RESET Button

The button can also be used to restore the software configuration settings to factory default values.

The operations are:

Operation	Function
Reset the device: Press the button and release during operation.	All LEDs ON, then reboot the device. The boot-up takes about 20 seconds and ends with all LEDs OFF.
Restore factory default: Press the button until all LED blinks, then release.	Restore all factory default settings. Then, reboot the device.

2.10 LED Indication

LED	Function	State	Interpretation
POWER	Power status	ON	The power is supplied to the device.
		OFF	The power is not supplied to the device.
MNGT	Management port status	ON	The port link up
		OFF	The port link down
		Blink	Traffic activity status
LINK	RJ-45 copper port link status	ON	The port link up
		OFF	The port link down
ACT.	RJ-45 copper port activity	OFF	No data traffic

		Blink	Data traffic activity
LINK/ACT.	SFP+ fiber port status	ON	The port link up
		OFF	The port link down.
		Blink	The port link up and data traffic activity
10G/5G/2.5G	Conversion line rate indication	5G/ON 2.5G/ON	10Gbps line rate
		5G/ON 2.5G/OFF	5Gbps line rate
		5G/OFF 2.5G/ON	2.5Gbps line rate
		5G/OFF 2.5G/OFF	1000Mbps line rate

2.11 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
Default Password of the device: 123

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 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.

2.12 Converter Function

The device supports the following media conversions between fiber cable and Unshielded Twisted-pair (UTP) (copper) cable:
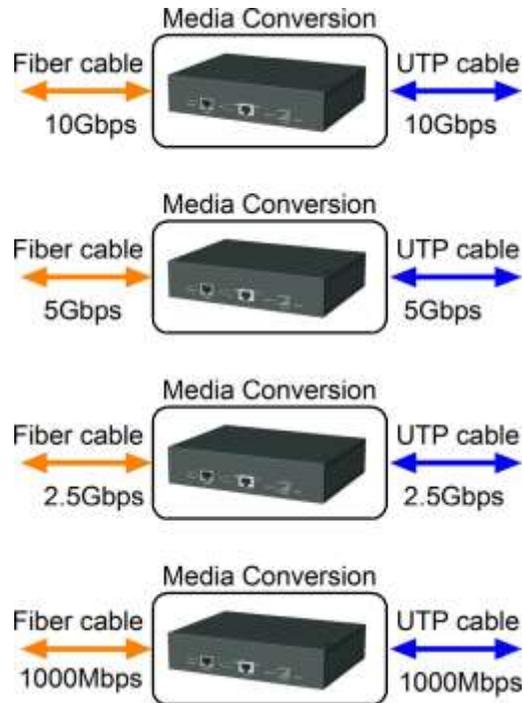
Operation Rules:

1. Under "Auto" port configuration mode, the conversion line rate depends on the link speed finally established with the link partner on the RJ-45 copper port. Otherwise, a fixed line rate among 5Gbps, 2.5Gbps, and 1000Mbps is applied for the device.

2. The packet forwarding, data conversion between the fiber segment and UTP segment is transparent. There is no packet modification in forwarding.

3. No packet type is limited in packet forwarding. The types include untagged packets, tagged packets, BPDU packets, and the reserved MAC control packets.

4. RJ-45 copper port link down will cause fiber port link down, but not vice versa.

2.13 Application

Negotiated line rate options:
10Gbps, 5Gbps, 2.5Gbps, 1Gbps
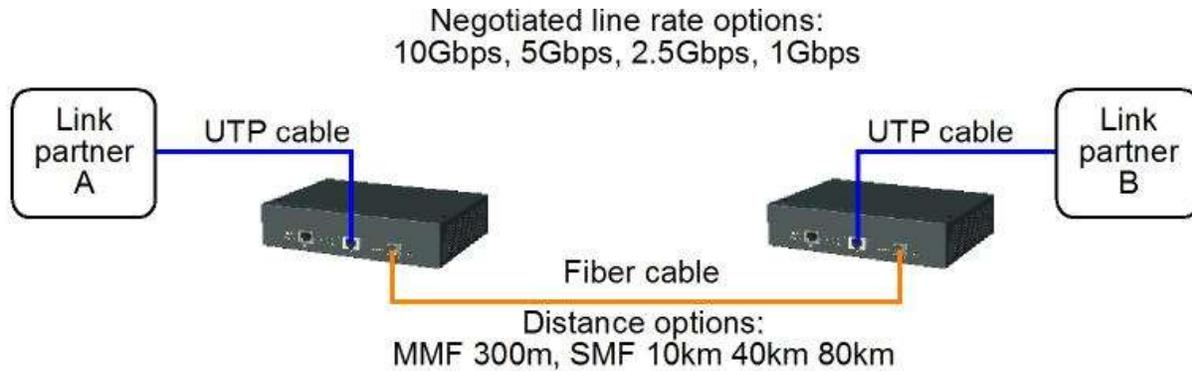
2.14 SNMP Support

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 following settings on web management UI 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 Trap 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.
- RJ-45 copper port link down
- RJ-45 copper port link up (link recovery).
- SFP+ fiber port link down
- SFP+ fiber port link up (link recovery).

Example of SNMP Trap Event:

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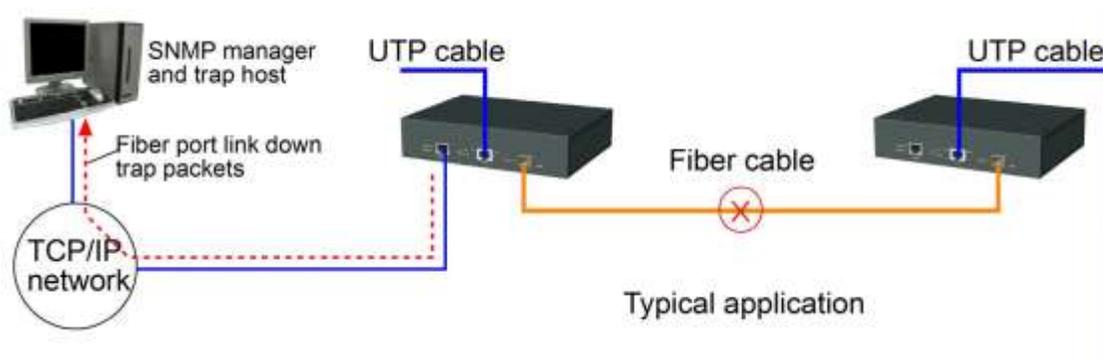
3. Web Management

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.

3.1 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

Factory default password : 123

3.2 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.

3.3 Main Management Menu

Configuration

System
Ports

Monitoring

Statistics Overview
SFP DDM
Ping

Maintenance

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

Monitoring

Statistics Overview   List statistics for the local ports

SFP DDM   Fiber port DDM status

Ping   Ping utility command

Maintenance

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 Transfer	Command to transfer (upload/download) configuration file
Logout	Command to logout from current web management

3.4 System

System Configuration

MAC Address	00-40-F6-CC-00-02
S/W Version	v1.0_beta_2019102310
H/W Version	1.0
Active IP Address	192.168.0.185
Active Subnet Mask	255.255.255.0
Active Gateway	0.0.0.0
DHCP Server	0.0.0.0
Lease Time Left	0 secs
Temperature	64.66 °C

DHCP Enabled	☐
Fallback IP Address	192.168.0.185
Fallback Subnet Mask	255.255.255.0
Fallback Gateway	0.0.0.0
Name	
Password	●●●
Inactivity Timeout (seconds)	0 (0 or 60~10000)
SNMP enabled	☑
SNMP Trap destination	0.0.0.0
SNMP Read Community	public
SNMP Write Community	private
SNMP Trap Community	public

[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
Temperature	The junction temperature sensed in the main chip
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
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
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.

3.5 Ports

Port Configuration

Enable EEE mode ☐

Port	MNGT	UTP	SFP+
Link	1000FDX	1000M	1000M
Mode	Auto ▼	Auto ▼	

Auto
Forced 10 Half
Forced 10 Full
Forced 100 Half
Forced 100 Full
Auto 1000 Full

Apply   Refresh

Port Configuration	Function
Enable EEE Mode	Check to enable EEE function.
Port	MNGT – Management port
	UTP – RJ-45 copper port
	SFP+ - Fiber port
Link	Port link status
	Line rate and Speed/duplex status with green background - port is link on
	Down with red background - port is link down
Mode	Select MNGT port operating mode

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

Select UTP to SFP+ operating mode (Line rate)

Mode	Line Rate
Auto	Use the speed established on the RJ-45 copper port after auto-negotiation with the link partner. It may be 10Gbps, 5Gbps,

	2.5Gbps, 1Gbps. (10Gbps: 10GBASE-T to 10GBASE-R)
5G	5Gbps (5GBASE-T to 5GBASE-R)
2.5G	2.5Gbps (2.5GBASE-T to 2500BASE-X)
1G	1000Mbps (1000BASE-T to 1000BASE-X auto-negotiation disabled)
Disabled	Disable the conversion

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

3.6 Statistics Overview

Statistics Overview for all ports

Clear   Refresh

Port	Tx Frames	Rx Frames	Tx Errors	Rx Errors
MNGT	852	8709	0	0
UTP	0	0	0	0
SFP+	37	88	0	0

Note:
The statistics data is not available on the UTP port for line rates of 100Mbps and 1Gbps.

Configuration	Description
Port	MNGT – Management port
	UTP – RJ-45 copper port
	SFP+ - Fiber port
Tx Frames	Total of packet frames transmitted 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

Clear	Click to reset all statistic counters.
Refresh	Click to refresh all statistic counters.

3.7 SFP DDM

SFP DDM

Port	FX
Identifier	SFP transceiver
Connector	LC
SONET Compliance	N/A
Ethernet Compliance	1000BASE-SX
Vendor Name	KTI Networks
Vendor OUI	0040F6
Temperature	N/A
Voltage	N/A
TX Power	N/A

[Refresh] [Back]

Status	Description
SFP Ports	Port numbers which are equipped with SFP slot.
Identifier	Identification information of the transceiver
Connector	The connector type used on the transceiver
SONET Compliance	The SONET compliance information of the transceiver
Ethernet Compliance	Ethernet compliance information of the transceiver
Vendor Name	The vendor name of the transceiver
Vendor OUI	The vendor OUI of the transceiver
Temperature	The current temperature sensed currently inside the transceiver
Voltage	The working voltage sensed currently inside the transceiver
TX Power	The transmission optical power sensed currently and shown in dBm

3.8 Ping

Ping Parameters

Target IP address	
Count	1 ▼
Time Out (in secs)	1 ▼

Apply

Ping Results

Target IP address	0.0.0.0
Status	Test complete
Received replies	0
Request timeouts	0
Average Response Time (in ms)	0

Refresh

Ping	Description
Target IP Address	The target IP address to which the ping command issues
Count	The number of ping commands generated
Time Out (in secs)	The time out for a reply (in seconds)
Apply	Start the ping command

Results	Description
Target IP Address	The target IP address to which the ping command issues
Status	The command status
Received replies	The number of replies received by the system
Request time-outs	The number of requests time out
Average Response Time	The average response time of a ping request (in mini-seconds)
Refresh	Click to refresh all statistic counters

3.9 Reboot System

Reboot System

Are you sure you want to reboot system? Yes No

This menu is used to reboot the device 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.

3.10 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.

3.11 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.

3.12 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

3.13 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

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*
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*

Ports	Configuration
Enable EEE Mode	*Disable*
MNGT port Mode	*Auto*
Line Mode	*Auto*