Media Converter-card

Features

◇ Support IEEE802.3 protocol, IEEE 802.3 10 Base-T, 802.3U,100Base-TX, 100Base-FX protocols

◇ High performance for   data transmission

◇ Wide dynamic range for IP data packet

◇ Comprehensive LED

◇ Standard Single fiber

◇ transmitting distance up to 120Km

◇ One RJ45 10/100Base-TX ports

◇ 10/100M Auto-negotiation

◇ Auto Half/Full Duplex

◇ Auto MDI/MDIX provides automatic cross

◇ Backbone structure.

Description

Fiber media converters with international standard of IEEE802.3, IEEE802.3u, IEEE802.3x support many different data communication protocols including Ethernet, Fast Ethernet, Gigabit Ethernet, as well as multiple cabling types such as twisted pair, multi-mode and single-mode fiber optics. Media converter types range from small standalone devices and PC card converters to high port-density chassis systems that offer many advanced features for network management. Simple Network Management Protocol (SNMP) enables proactive management of link status, monitoring chassis environmental statistics and sending traps to network managers in the event of a fiber break or even link loss on the copper port.

The WDM Bi-Direction converter is equipped with one fiber connection which adapts the WDM technology and one RJ-45 port with auto-negotiation MDI/MDI-X. Six LED indicators are built-in for diagnosing and monitoring the status of this device. It can be configured automatically for full Duplex or Half Duplex operation.

10/100Mbps Auto-negotiation Media Converter

The Media Converters are classified as below according to the transmitting distance and transmitting mode:

MM   0—2km

MM   0—5km

SM   0—25km

SM   20—50km

SM   40—80km

SM   50—120km

They are also classified as below according to different power supply:

10/100M Internal Power Supply

10/100M External Power Supply

Definitions for front panel and indication light:

A. **Front Panel of 10/100M Media Converter (Internal Power Supply)：**

TX is the optical transmitting.

RX is the optical receiving.

FX Indicator（RX）：

ON: the optical receiving is ok

OFF: the optical receive is failure;

FX Link Indicator(FXL)：

ON: normal linking status

FLASH: transmitting data

OFF: failure（IF the RX is on and the FXL is off，it means the TX or the terminal RX is failure.）

Power Supply Indicator(PWR)：

ON: Operating

OFF: No operating

TX Link Indicator(TXL)：

ON: TP linking status is ok

FLASH: transmitting data

OFF: failure

Speed Indicator(SPD)：

ON: operating speed is 100M

OFF: operating speed is 10M

Duplex Indicator（FDX）：

ON: Full duplex

OFF: Half duplex
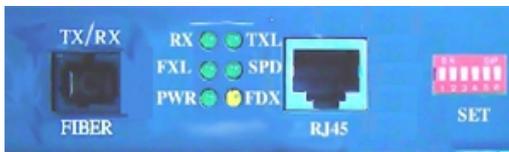
RJ-45 interface is for UTP connection

SET is for 6 function switches(Please refer to Configuration of DIP for details)

B. **Front Panel of the 10/100M Media Converter   (External Power Supply)**

Indicators are as the same as those of Internal Power Supply Media Converter

C. **Front Panel of the 10/100M WDM Bi-Direction   (Media Converter Front board)**

Indicators are as the same as those of Internal Power Supply Media Converter

Parameter

Item	Specification
Standards	IEEE802.3 , IEEE802.3u ,IEEE802.3x
Data rate	10/100/1000Mbps
Operating wavelength	850±20nm, 1310±25nm, 1550±25nm
Transmit distance	Multi-mode: 2km、5km Single-mode：25km、40km、60km、80km、120km
Fiber interface	SC,FC,ST Fiber converter
Fiber type	Multi-mode: 50/125um or 62.5/125um Single-mode: 9/125um
RJ45 port	UTP-1000ohm Cat.5 cable up to 20km
Internal power supply	AC100~240V/50~60Hz/0.2A for standalone
Power consumption	5W
Operation temperature	0 ~ 60 C
Storage temperature	10 ~ 70 C
Humidity	5 ~ 95%(Non-condensing)
EMI and safety	CE,FCC Class A
Dimension	100(W)*80(D)*25(H)mm (2U)

Media Converter-card

Weight	0.2kg

Application

1. Backbone Structure

*These media converters are widely used to the core backbone structure basing on their

   SPANNIG TREE.

*Complying with the network protocols of IEEE802.3.

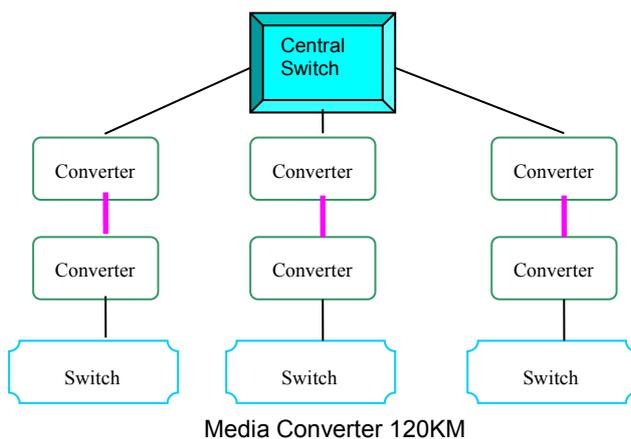*Providing multimedia network such as video, audio, data, on-spot monitor, and so on.

*Reliable operation by modularization and master power supply.

Media Converter 120KM

Backbone

Media Converter 120KM
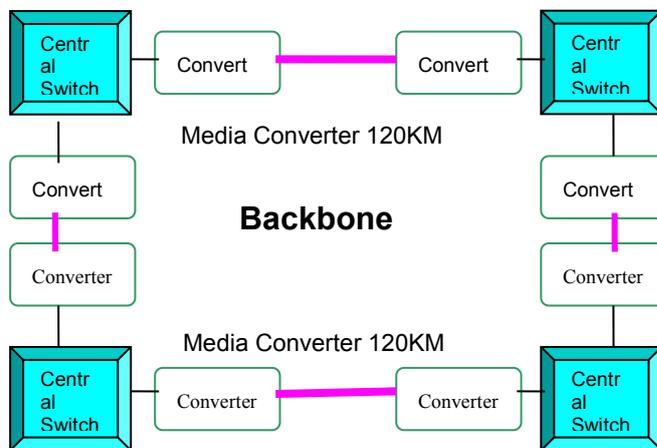
2. Star link：

*The Star Link saves a great deal of optical fiber.

*Available for highway, transmit electricity and other net
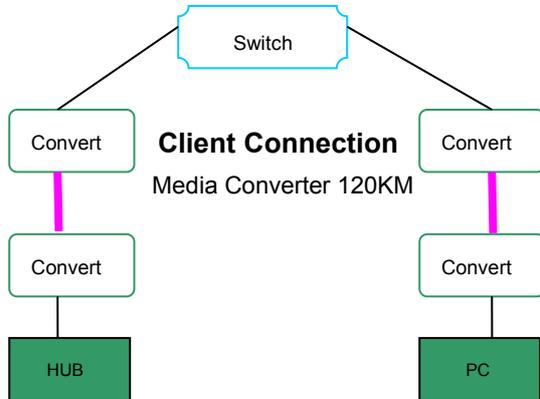

Media Converter 120KM

3. Client Connection：

*It is not necessary for the client to choose10M or

100M due its auto-negotiation function.

*The client can choose the power supply internal or

external basing on their demands.

*Half/Full duplex auto-negotiation function of media converter can reduce client's cost.
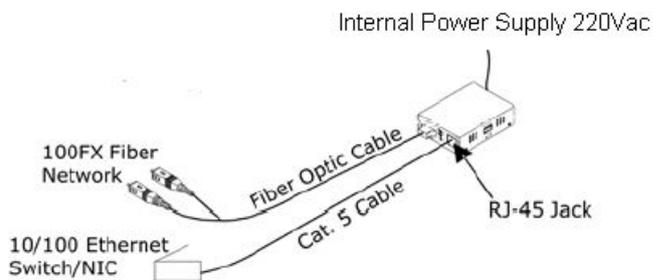

Client Connection
Media Converter 120KM

4. Configuration of Media Converter and Network：

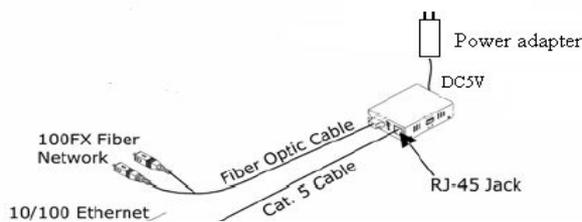*The Media Converters used for connection between different devices in network are shown as below.

Media Converter 120KM

5. Installation

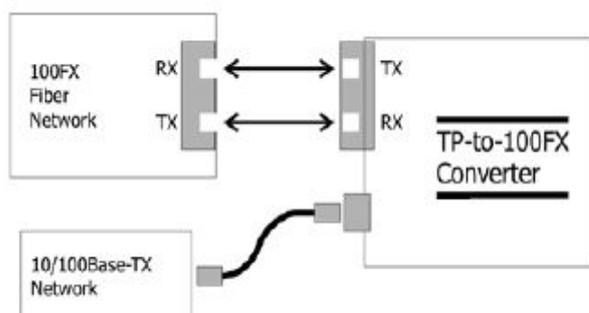1). Connection (Internal Power Supply)

<Pic 1>

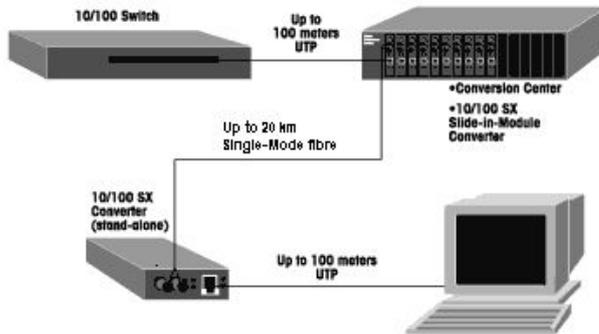2). Connection (External Power Supply)

<Pic 2>

<Pic 3>

com

4). Application Recommended:

<Pic 4>

5). The clients can start to install the media converters with reference to above schematic drawings.

6). Please make sure that the media converter which you choose can match connector or fiber cable of network.

    A.   SM Media Converter is only available for

        Single Mode optical fiber.

    B.   MM Media Converter is only available for

        Multi-Mode optical fiber.

    C.   SC Media Converter is only available for

        optical fiber with SC connector.

    D.   FC Media Converter is only available for

        optical fiber with FC connector.

    E.   ST Media Converter is available for optical

        fiber with ST connector.

7). Linking the Media Converter by UTP within 100m.

Pin1 Pin8
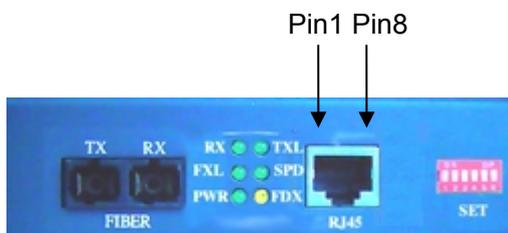
TX Pins of the Media Converter：

Pin1-TX+	Pin5-Not Used
Pin2-TX-	Pin6-RX-

Pin3-RX+	Pin7-Not Used
Pin4-Not Used	Pin8-Not Used

The TX is used to connect the converter with Ethernet

Switch or Other device

8). If the converter is connected to the third party,

 please make sure whether the third party supports

 the full/half duplex or not.

9). If the converter is the WDM BI-Direction, please make sure one device is 1310Tx-1550Rx and

the other is 1550Tx-1310Rx.

6. Configuration of DIP

 The DIP Switch is installed in the 10/100M Media Converter Module.（It is shown on the front

 panel for Power Supply internal Media Converter, or on the motherboard for external Power

 Supply Media Converter）

 The module of DIP provides several functions:

*Setting up TX Half/Full Duplex

*Setting up TX 10Mbps, 100Mbps or 10/100Mbps

1	2	3	Specification
OFF	OFF	OFF	Auto-negotiation
ON	OFF	OFF	100M,Full Duplex(Default)
ON	OFF	ON	10M Half/Full duplex Auto-negotiation
ON	ON	OFF	10M,Full duplex
ON	ON	ON	100M,Half/Full duplex, Auto-negotiation
4、5、6、No function provided.			

7. Failure solution

If you have any problem as below stated, you can try to solve by yourself according to below

method.

1). PWR indicator is off

Power supply is failure. Please check the connection of the line and the connector.

2). FXL indicator is off

*Check the optical fiber is broken or not.

*Check the optical link loops is too large or not

*Check the fiber optic connecter：an Rx to a TX，a TX to an RX.

3). TXL indicator is off

*Check the network link is offline or not.

*Check the line category matches or not.

*Check the speed rate is matched or not

4). Data Packet lost.

*Check the duplex mode matches or not between the Media Converter TX and another equipment TX.

*Check the UTP and RJ-45 connectors.

*Check the connection of Patch Cord.

Package contents

Please clarify whether there are below items in the package before you start to install the Media Converter.

Media Converter

User's Manual

1 Power Adapter (External Power Supply) or 1 Power Line (Internal Power Supply)

Notes

1. Media Converter is a sensitive electronic item, please do handle with extra care on delivery, shifting and humidity.

2. This unit will be warranty for 1 year.

3. Whenever there is a problem regarding the quality issue within the warranty period, OP will take the responsibility to repair with free.

4. After the warranty period, we will charge you accordingly basing on the fault or damage.

5. Whenever there is a fault, you can contact our technical support after you identify the problem and the alarm.