

## 10/100 Single Mode Media Converter (SC - 30km) ET90110SM30

### Introduction

Thank you for purchasing a StarTech.com Single-Mode Media Converter. This product offers a cost-effective method of bridging two Ethernet networks using single-mode fiber optic cable, at distances up to 30km (~19 miles).

### Features

- Simple installation and use
- Supports full or half-duplex operating modes
- Supports loop-back testing

### Before You Begin

#### System Requirements

- Fiber Cable
- 10Base-T; Cat 3, 4 or 5 or 100Base-Tx, Cat 5 or 6 cable
- Power source

#### Contents (per unit)

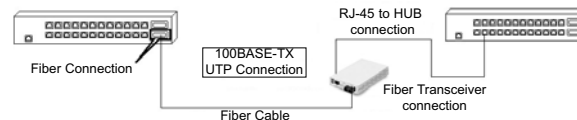
- Media Converter (1)
- 12V DC Power Adapter (1)
- Instruction manual (1)

### Basic Setup

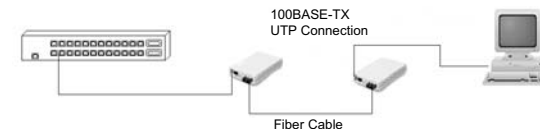
1. Connect the fiber interface cable to the Unit. Using UTP cable, connect the ethernet connection to the RJ45 jack.
2. Set the **Duplex** switch (full/half) according to the specifications of your equipment.

### Media Converter Connections

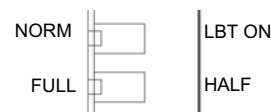
The following example illustrates the connection scheme when connecting from a 10Base-T/100Base-TX port of one hub to a 100Base-FX port of another hub, through the fiber converter:



The following example illustrates the connection scheme when connecting from a 10Base-T/100Base-TX port of one hub to a 10Base-T/100BASE-TX Network Interface Card (NIC) in a computer through the fiber converter:



### Front Panel DIP Switch Settings



#### 1. Full/ Half:

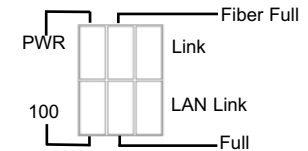
The Fiber and UTP Duplex will be configured in Full-duplex or Half-duplex. **\*This switch includes an "Auto Reset" function so the power-reset is not necessary when any modification is made here.**

#### 2. NORM / LBT - Loop-back test :

(NORM = Not Active, LBT ON = Active) **Please note:** If the local side loop-back test is active, then LEDs (except PWR) will all blink rapidly and refresh to display the remote side status.

### LED Indicators

The following diagram and chart outline the meaning of each LED located on the media converter(s):



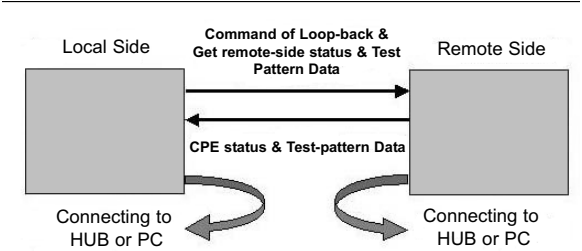
| LED        | Function        | State                 | Status                                                                                        |
|------------|-----------------|-----------------------|-----------------------------------------------------------------------------------------------|
| PWR        | Power Indicator | On<br>Off<br>Blinking | Converter has power<br>Converter has no power<br>LB testing & Get CPE status function enabled |
| Fiber Full | Mode display    | On<br>Off             | Fiber side Full Duplex mode<br>Half-duplex mode                                               |
| Link       | Fiber link      | On<br>Off<br>Blinking | The fiber link is ok<br>No link, or the link is faulty<br>Receiving data on the fiber         |
| 100        | Link Speed      | On<br>Off             | 100Mbps Link Speed<br>10Mbps Link Speed                                                       |
| Full       | Mode display    | On<br>Off             | Ethernet side Full Duplex mode<br>Half Duplex mode                                            |
| LAN Link   | Ethernet Link   | On<br>Off<br>Blinking | The UTP link is ok<br>No link, or the link is faulty<br>Receiving data on Ethernet            |

**Loop-back Testing (LBT)  
& Get CPE status**

The fiber media converter incorporates a Fiber Loop-back Testing feature which allows the system to confirm whether or not the fiber or Ethernet circuit loop is complete. The local-side unit will send out a detect message which includes both command and test-pattern data to the remote-side unit and request for an answer. When the remote-side unit receives the message, it will attempt to recognize the command. After the remote-side unit recognizes the command message, it will deliver the received test-pattern data back to the local-side unit, completing the circuit loop, and enabling the rack mount unit to easily monitor the remote side unit(s). The remote side status message includes the fiber-side link and duplex status, the UTP-side link, duplex, speed, power, transmission and fiber failure status.

Please note that while Loop-back testing is in process, the fiber side transmission will be halted.

**If the local-side cannot access the remote-side while in Loop-back Testing mode, only the power LED will flash (rapidly):**



**Support, Warranty Information, and Regulatory Compliance Statement**  
 If you ever need help with your product, visit [www.startech.com/support](http://www.startech.com/support) and access our comprehensive selection of online tools, documentation, and downloads. This product is backed by a one-year warranty. In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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**FCC Compliance Statement:** 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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:  
 • Reorient or relocate the receiving antenna.  
 • Increase the separation between the equipment and receiver.  
 • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.  
 • Consult the dealer or an experienced radio/TV technician for help.

**General Specifications**

|                                  |                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------|
| Additional Features              | Loop-back testing, Remote Monitor status, two frame lengths                     |
| Network Standards Compliance     | IEEE 802.3 10Base-T, 100Base-TX, 100Base-FX. Supports Full Duplex Ethernet Mode |
| Operating temperature            | 0°C - 50°C, 10-90% Humidity (non-condensing)                                    |
| Cable Length                     | 30km (max)                                                                      |
| Product Dimensions (LxWxH)       | 122mm x 85mm x 20mm (4.8 x 3.3 x 0.8 in.)                                       |
| Product Weight                   | 2.03lbs (0.92kg)                                                                |
| Data Transfer Rate (max.)        | 200 Mbts/sec (Full duplex)<br>100 Mbts/sec (Half duplex)                        |
| Certifications (regulatory etc.) | FCC Class A, CE                                                                 |
| Power Adapter                    | DC 12V, 1A, Center Pos.                                                         |