

**Regulatory Approvals**

FCC Class A  
 UL 1950  
 CSA 22.2 No. 950  
 EN60950  
 CE  
 – EN55022 Class B  
 – EN50082-1

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 EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity  
 EN60950 (IEC950) - Product Safety

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- vendor or place of purchase

You can reach MILAN Technology technical support at:

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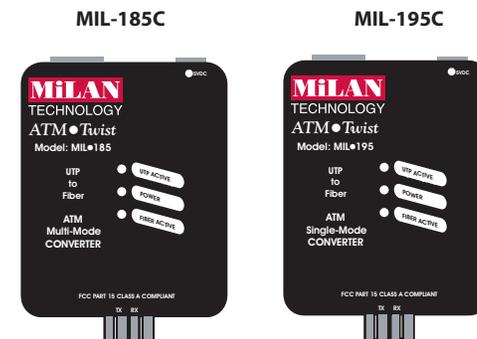
<http://www.milan.com>  
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## MIL-185C/MIL-195C

### ATM • Twist

### ATM Fiber/UTP Converter

**Installation Guide**

This guide includes the following information:

- "Introduction" on page 2
- "Installation" on page 3
- "Configuration Option" on page 4
- "Specifications" on page 7

## About this Manual

This manual covers both the MIL-185C and the MIL-195C media converters.

The terms “converter” or “device” are used throughout the document to describe either the MIL-185C or the MIL-195C.

## Introduction

The MIL-185C and the MIL-195C are compact, physical media converters that allow the user to convert signals between ATM fiber optic cabling in either multi-mode or single-mode, and UTP cabling. Both converters support OC-3 (155Mbps) speeds.

## Features

- Fiber budget sufficient to drive 2 km for multi-mode or 15 km for single-mode fiber
- One SC-type single-mode (MIL-195C) or one SC-type multi-mode (MIL-185C) connector
- One shielded RJ-45 UTP connector
- External power supply
- Diagnostic LEDs
- Small form factor

## Operating Conditions

**Table 1: Recommended Operation Conditions**

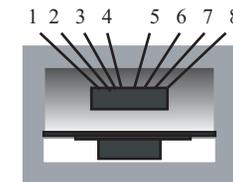
Parameters	Minimum	Maximum
Operating Temperature	+5° C	40° C
Humidity: non-condensing	10%	95%
Signal Output Load	35 ohm	75 ohm
Supply Voltage	4.75 V	5.25 V

## Power Supply

External power is required. The device draws 900 mA at normal operation in room temperature of 25° C.

- Domestic: 110 V AC wall mount power supply.
- International: 220 V AC power supply with IEC receptacle.

## Connectors



**Figure 5. RJ-45 Connector**

## RJ-45 Pinouts

- Pin 1 = Transmit Data +
- Pin 2 = Transmit Data -
- Pin 7 = Receive Data +
- Pin 8 = Receive Data -

## MIL-195C

The MIL-195C converter supports full-duplex ATM Fiber/UTP links. For fiber budget constraints, the MIL-195C has a launch power of -19 db and a receive sensitivity of -30 db (using a 1300 nm class 1 laser). In a full-duplex environment, up to 100m of CAT 5 UTP and 15km single-mode fiber can be used.

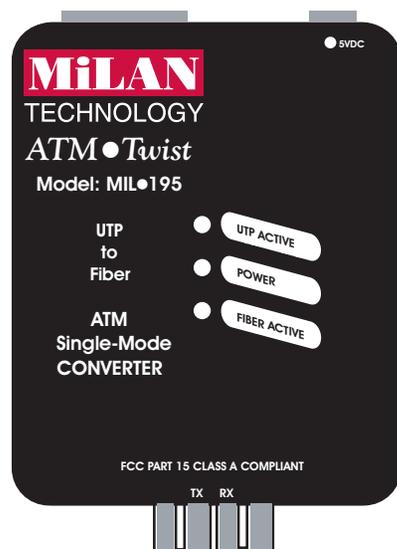


Figure 4. MIL-195C

## Specifications

### Storage Temperature

- Minimum: -25° C
- Maximum: 75° C

## Installation

To install either converter:

1. Attach the CAT 5 UTP cable from the network to the RJ-45 port on the device.

*Note:* Use screened CAT 5 UTP cable for CISPR-22 class B installation.

2. Attach the fiber network cable connectors to the connectors marked “RX” (Receive) and “TX” (Transmit).
3. Connect the power receptacle from the wall adapter to the unit.
4. Verify that the power LED illuminates.
5. Verify that both the UTP and the FIBER active LEDs also illuminate when all cables are attached.

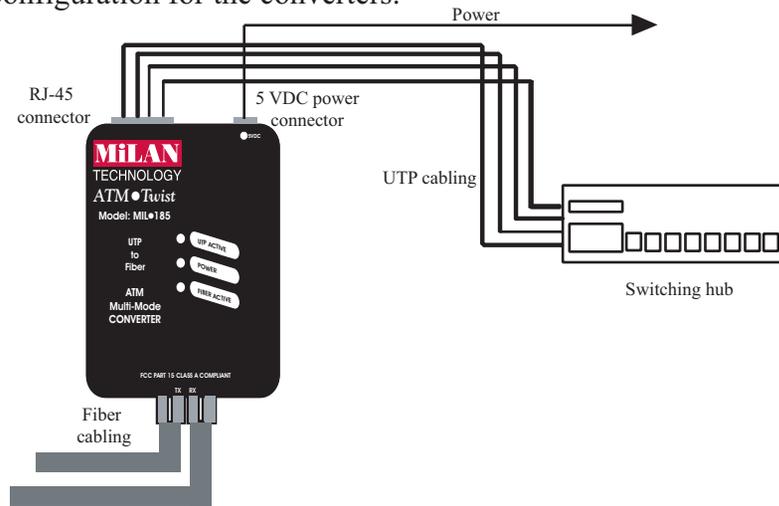
*Important notice:* This device is set to half duplex mode at the factory. If you are experiencing excessive collision errors or CRC errors, then you must force full duplex mode operation on the connecting device(s) before you power up the MiLAN device(s).

## Diagnostic LEDs

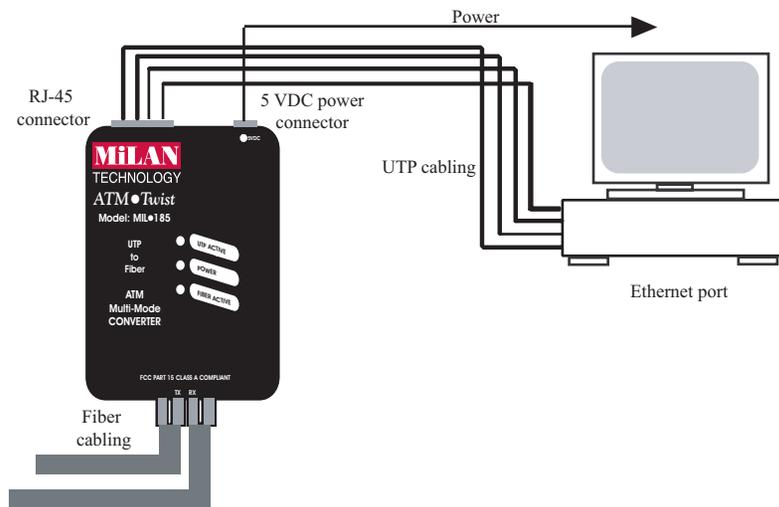
- **UTP ACTIVE:** Illuminates when the device receives a valid signal from the device connected to the UTP port
- **POWER:** This LED illuminates when the device is powered up
- **FIBER ACTIVE:** Illuminates when the device receives a valid signal from the device connected to the fiber port.

## Configuration Options

The following two figures display the typical network configuration for the converters.



**Figure 1. Fiber Network to Switching Hub**

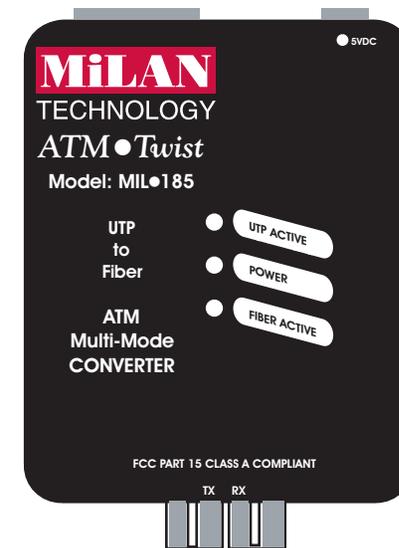


**Figure 2. Fiber Network to Remote—Full-Duplex Workstation**

## Special Notes

### MIL-185C

The MIL-185C converter supports full-duplex ATM Fiber/UTP links. For network budget constraints, the MIL-185C has a launch power of -19 db and a receive sensitivity of -31 db (using a 850 nm class 1 laser). In a full-duplex environment, up to 100m of CAT 5 UTP and 2km of multi-mode fiber may be used.



**Figure 3. MIL-185C**