

# Media Converters

D A T A  
S H E E T

## 160T Fiber-Twist Single Mode Fiber 10Base-T to 10BaseFL 170T Fiber-Twist Duplexer Single Mode Fiber 10Base-T to 10BaseFL



- Does not add to repeater budget
- Allows long fiber segments to be connected without optical attenuation
- Guarantees compatibility with all 10BaseFL, and non-10BaseT compliant 802.3 Ethernet equipment
- Fits easily into small spaces
- Allows data transmissions of up to 10 Km over full-duplex fiber cabling.
- 5 year warranty

The Fiber•Twist (MIL-160T) for single mode is an UTP to fiber optic media converter designed to interconnect standard LAN-based Ethernet ports at distances of up to four kilometers. The Fiber•Twist converts Ethernet media without adding the delay associated with repeaters and won't add to your repeater budget.

The unit features LinkSentry™. Enabling this feature allows the 160 to pass through line failures when signals are lost, as well as looping back failures, in the event one strand is damaged in a cable.

The Fiber•Twist single mode duplexer (MIL-170T) is an UTP to single mode fiber optic media converter. It is designed to interconnect standard and full-duplex LAN-based Ethernet ports at recommended distances of up to 15 kilometers. The Fiber•Twist single mode duplexer converts Ethernet media without adding the delay associated with repeaters and won't add to your repeater budget.

ST Connectors are used for single mode fiber optic cabling. A shielded RJ-45 connector is used for the UTP 10Base-T port.



# Features/Specifications

## Features

- Uses single mode fiber
- Converts UTP to fiber optic cabling without adding delay
- Automatic sensing of low-light level conditions disables link upon detection
- Compliant with Ethernet IEEE 802.3 specifications
- Small form factor of 3.5" L x 2.9"W
- Internally Link selectable
- Converts UTP to single mode fiber optic cable
- Supports both full-duplex and standard Ethernet
- Converts without adding delay

## Product Package

- Installation guide

## 10Base-T

- IEEE 802.3 compliant UTP interface

## RJ-45 Connector

- Type: 8-position shielded RJ-45 receptacle:
  - 1- TX+ 5-
  - 2- TX- 6- RX-
  - 3- RX+ 7-
  - 4- 8-
- Straight cabling for hub connection
- Swap wires 1 to 3, 2 to 6, 3 to 1, and 6 to 2 for workstation connections

## 10BaseFL

- IEEE 802.3 compliant, FOIRL

## ST Style Connectors

### Fiber Characteristics:

Unit	Typical	
	160	170
■ Attenuation dB/Km	0.5	.5
■ Diameter mm	8. - 9	8. - 9
■ Tx-Rx Wavelength nm	1300	1300
■ Tx Launch Power dB/m	-31	-19
■ RX- Sensitivity dB/m	-36	-36
■ Dynamic Range dB/m	5	16

## LEDs

Provides a complete set of diagnostic LEDs to analyze your network activity at a glance. LEDs light to indicate:

- RCV/TP: Receiving data packets from the UTP network
- UTP LINK: UTP link is intact
- POWER: Receiving power from wall adapter
- RCV/FIBER: Receiving data packets from the fiber port
- COL/FIBER: Collision detected on Fiber port
- FIBER LINK: Fiber link is intact

## Electrical

- Voltage 16 - 20 VAC
- Amperage 200mA
- Power Rating 10 W

## Standards Compliance

- FCC A
- CISPR-22 Class B
- UL
- CSA, CE Marked
- CE Marked

## Environmental

- Operating Temperature 0 - 50 C
- Storage Temperature -20 - +70 C
- Humidity (non condensing) 10% - 90%

## Budget Example

To ensure a functional fiber link, the total attenuation loss in the link must be equal to or less than the dynamic range value. The typical loss through interconnects is 1dB. The equation is;

Dynamic Range - (Attenuation \* Cable length) - (Number of Interconnects \* Loss per Interconnect) 0

For example, if the total cable length is 10 Km and three interconnects.

$$16 - (10 * 0.5) - (3 * 1) = 8 \quad 0 \text{ dB/m}$$

## Maximum Distance

- Half-duplex 2 Km
- Full-duplex 10 Km

Half-duplex is also limited by the total span of the network.

## Digi Service And Support

You can purchase with confidence knowing that Digi is here to support you with expert technical support, the industry's strongest warranty (five full years) and a 30 day money-back guarantee.

## Dimensions

Height	Width	Depth	Weight
2.9 in. (7.36 cm)	3.5 in. (8.89 cm)	(2.5 cm)	Unit 6 oz. (.17 Kg) Shipping 14 oz. (.39 Kg)

## Physical

The MIL 160T/170T are packaged in lightweight aluminum alloy with a black finish for years of durable, maintenance-free use.

## Models and Part Numbers

Fiber Twist Single Mode 10Base-T to 10BaseFL (110V power supply) . . .MIL-160T
Fiber Twist Single Mode 10Base-T to 10BaseFL (220V power supply) . .MIL-160TIN
Fiber Twist Duplexer SMF 10BaseFL to 10Base-T (110V power supply) . .MIL-170T
Fiber Twist Duplexer SMF 10BaseFL to 10Base-T (220V power supply) .MIL-170TIN

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