# TE100-DSM
# TE100-DFXM
# TE100-DTXM
# Hub Expansion Module
# User's Guide

Rev. 01 (February, 1998)

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# Introduction

There are three optional modules that may be added to the TE100-DM16 and TE100-D16s series hubs. Two of the modules (TE100-DTXM and TE100-DFXM) offer a different additional network interface that allows for greater flexibility in how these hubs may be used in a network. The Switch module (TE100-DSM) provides internal switching capabilities so that 10Mbps and 100Mbps segments can transmit and receive data.

The sections follow provide a brief overview of each module and basic instructions on settings and indicators.

# Module Installation

The installation procedure for each module is the same. Additional information about each module is provided below.

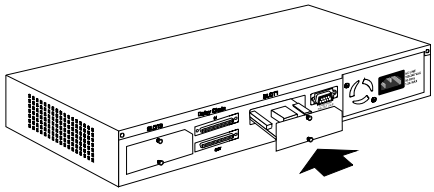
To install any of the modules:

1. Locate a module slot in the hub's rear panel. (Note that the Switch module can only be installed in Slot 1 – the center slot of TE100-DM16 series hubs.)

2. Using a screwdriver, undo the two screws and remove the dust cover on the module slot.

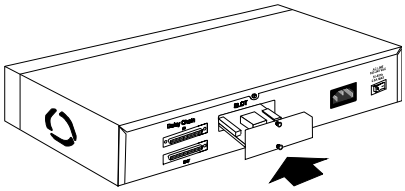
3. Holding the module component-side up and connector-side in, gently slide the module along the guides and seat it in the internal connector.

4. Using a screwdriver, replace the two screws and tighten until snug.



**Module Installation in a TE100-DM16 Series Hub**

We recommend that you retain the dust cover in case you need to remove the module for an extended period sometime.



**Module Installation in an TE100-D16s Series Hub**

# Switch Module (TE100-DSM)

This Switch module is used to allow interconnection between the 10Mbps and 100Mbps segments in the hub or hub stack. Each hub stack should have one switch module to allow 10Mbps and 100Mbps stations to communicate. (Note that the switch module can only be installed in Slot 1 – the center slot, of TE100-DM16 series hubs.)

**NOTE:** *In a stack containing an TE100-DM16 series intelligent master hub, more than one Switch module may be used to provide increased reliability. The Spanning Tree Protocol implemented by the management agent can control the Switch modules to provide automatic link redundancy and prevent network loops.*

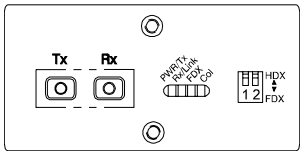
# Fiber Optic Module (TE100-DFXM)

The Fiber Optic module provides a standard Fast Ethernet 100BASE-FX fiber optic connector. A fiber optic connection of this kind is particularly useful for creating a link between two hub stacks, placing them in separate collision domains. A link of this sort eliminates the need for a separate switch to separate stacks into separate domains. Separating the stacks into separate collision domains overcomes the Fast Ethernet two-repeater limitation, and effectively doubles overall bandwidth.

The Fiber Optic module includes the following LED indicators:

- **Power/Tx** This LED is lit when the hub is on and blinks when packets are being transmitted by the module.

- **Link/Rx** This LED is lit when the fiber optic ports are properly connected to a powered-on device and blinks when packets are being received by the module.




- **Collision** This LED blinks when there are packet collisions on the fiber optic link.

- **FDX** This LED is lit when the fiber optic port is set for Full Duplex transmit and receive. When the LED is off, the fiber optic port is in Half Duplex mode.

The duplex mode DIP switch allows you to set the fiber optic lines to Full Duplex mode operation.

Only the right-hand switch (number 2) is active. Use it to set the duplex mode.

## Fast Ethernet Module (TE100-DTXM)

The Fast Ethernet module provides one additional twisted-pair Fast Ethernet connection. A twisted-pair connection of this kind is particularly useful for creating a link between two hub stacks, placing them in separate collision domains. A link of this sort eliminates the need for a separate switch to separate stacks into separate do-

mains. Separating the stacks into separate collision domains overcomes the Fast Ethernet two-repeater limitation, and effectively doubles overall bandwidth.

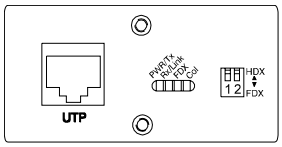
The recommended use for this module is to connect another module of this kind in a second stack.

The Fast Ethernet module uses a MDI-X connector (not a straight MDI) and, therefore, a crossover cable must be used when connecting the module to another module.

The Fast Ethernet module includes the following LED indicators:

- **Power/Tx** This LED is lit when the hub is on and blinks when packets are being transmitted by the module.
- **Link/Rx** This LED is lit when the port is properly connected to a powered-on

device and blinks when packets are being received by the module.




- **Collision** This LED blinks when there are packet collisions on the module line.

- **FDX** This LED is lit when the port is set for Full Duplex transmit and receive. When the LED is off, the port is in Half Duplex mode.

The duplex mode DIP switch allows you to set the port to Full Duplex mode operation. Only the right-hand switch (number 2) is active. Use the DIP switch to set the duplex mode.