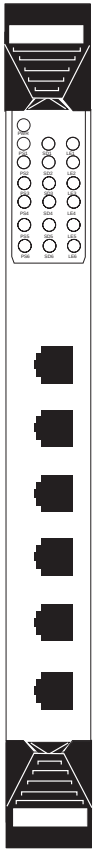
Using The LEDs For Fault Diagnosis

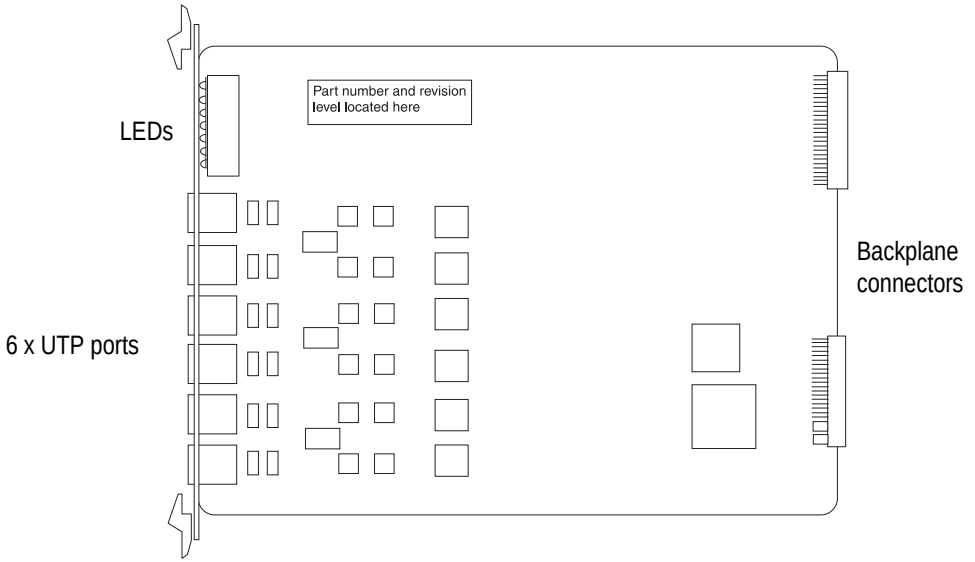
The LEDs on the front of the 6 Port UTP Module provide simple at-a-glance fault diagnosis.



PWR	**Red/Green flashing**	Lamp test.
	Green on	Module is connected into a ring and is operational.
	Green flashing	Module has not been connected into a ring.
	Red on	A fault has been detected on the module.
PS*n* (Port Status)	**Green on**	Port *n* has an **active** connection and is incorporated into the FDDI ring.
	Green flashing	Port *n* has a **standby** connection and is waiting to join the ring.
	Off	Port *n* is either **disabled**, or in the process of **connecting**.
SD*n* (Signal Detect)	**Green on**	Signal detected on port *n*.
	Off	No signal detected on port *n*.
LE*n* (Link Error)	**Yellow on**	Link Error Rate (LER) estimate is equal to or exceeds the LER alarm threshold.
	Off	Normal operation.

For information on how to test the LEDs, refer to the 'LinkBuilder MSH Chassis User Guide'. During a lamp test all single color LEDs are lit continuously and all bi-color LEDs flash red/green alternately.

Part Number: DUA1830-1AAA01
Revision: 00
Issued: October, 1994



The FDDI 6 Port UTP Module

When fitted as part of a group of FDDI modules that includes an FDDI RingBuilder Module, this module provides an additional 6 UTP ports (ANSI X3T9.5 TP-PMD) for connection to UTP segments.

The FDDI 6 Port UTP Module can be used with the following modules:

- ☐ 3C18310 MSH FDDI RingBuilder Module (mandatory)
- ☐ 3C18300 MSH FDDI 4 Port Fiber Module
- ☐ 3C18640 MSH LinkSwitch Module
- ☐ 3C18645 MSH LinkSwitch Expansion Module

Your supplier will know of any other modules not listed here.

All MSH FDDI port modules **must** be installed to the immediate left of an FDDI RingBuilder as part of a contiguous group of FDDI modules. Other types of MSH module cannot be placed between FDDI modules intended to be part of the same FDDI ring.

For general information, warranty details and instructions about installing modules into the LinkBuilder MSH, please refer to 'The LinkBuilder MSH Chassis User Guide', part number DUA1800-0AAA0x.

Details of LinkBuilder local and network management functions are available in the manuals that accompany the MSH management module.

Safety Information

Please read the following safety information before installing the module.

- ☐ Installation of this module should be carried out by *qualified personnel only*.
- ☐ This module operates under SELV conditions (Safe Extra Low Voltage according to IEC 950), but only if connected to equipment that is also operating under SELV.
- ☐ To maintain the integrity of SELV circuits, only SELV connections should be made to the RJ45 data interface.
- ☐ The MSH chassis must be earthed.

Modules can be easily damaged by static:

- ☐ Do not remove the module from its anti-static packaging until you are ready to fit it onto a Smart Module.
- ☐ Do not touch the pins, leads, connections or any components on the module.
- ☐ Handle modules only by their edges.
- ☐ Always wear an anti-static wristband

This guide is written for the installation engineer and the network administrator who manages and maintains the network.

After installation, this guide should be stored in the documentation holder located underneath the MSH chassis.

Installing the Module

(A fuller version of this procedure, including diagrams, can be found in 'LinkBuilder MSH Chassis User Guide', part number DUA1800-0AAA0x.)

1. Select a free slot in which to install the module. This slot must be either to the immediate left of an FDDI RingBuilder, or to the immediate left of another FDDI port module or group of FDDI port modules that are installed to the immediate left of an FDDI RingBuilder.
2. Remove the locking bar from the front of the MSH chassis. and remove the appropriate blanking plate. Retain the blanking plate in case you later remove the module.
3. Insert the module into the chassis. Operate the module's ejectors to secure the module.
4. Replace the locking bar on the front of the MSH chassis.

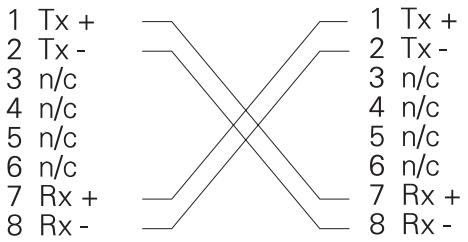
Connecting Cables

Warning
Do NOT connect an RJ45 data port to a telephone network. The voltages on the telephone system may damage your module and be a hazard to you.

Category 5 cabling and connecting hardware should be used, as specified by the ANSI X3T9.5 standard. The maximum length of cable from the module to any potential end station is 100m (328ft), including patch panel cabling.

All UTP ports conforming to the ANSI X3T9.5 standard are wired the same way, without a crossover in hub ports. For correct operation your wiring system must introduce a crossover in the cabling between end station and hub ports. This crossover will normally be achieved in patch panel wiring but may be achieved by a single crossover cable between end station and hub.

A suitable crossover is wired with the transmit pair from the hub connected to the receive pair on the end station and the receive pair on the hub connected to the transmit pair on the end station. The pin assignments for a cable wired like this are shown in the diagram below.



Crossover Cable Pin-out

Connect cables as required. When connecting cables ensure that the module is powered up and operating normally, and that the remote end of cables are connected to powered up and operational equipment. This will allow you to use the LEDs to immediately establish that successful connections have been made.

If cables have been connected correctly, the **SD*n*** LED for the port should light. (See table over for further details of module LEDs.) If the LED does not light, refer to the Fault Diagnosis section.

Configuring the Module

There are no links or jumpers on the card that require configuration. The functions of the FDDI 6 Port UTP Module are completely controlled by the FDDI RingBuilder it is attached to.

All ports on the module are configured as M type FDDI ports and are designed to be connected to FDDI type S ports.

For further details on configuring and managing FDDI modules refer to the 'MSH FDDI RingBuilder User Guide' (part number DUA1831-0AAA0x).

Technical Information

Mechanical

Weight	440 g (1.0 lb)
Size	223.3 x 152.2 mm (8.8 x 6 in)

Electrical - Power Consumption

+12V supply	0.1A
+5V supply	5.5A

Fault Diagnosis

If you suspect a problem:

- ☐ Check the status of the LEDs on the front panel of the module, as described overleaf. Carry out a lamp test to check that all LEDs are functioning.
- ☐ Check the PWR LED on the related FDDI RingBuilder Module. If it is red, a fault has occurred during power up self test or in operation.
- ☐ Check the configuration of the port module.
- ☐ Check that the port module is correctly configured in a group of FDDI modules with an FDDI RingBuilder to the right of all port modules.
- ☐ Check all connections, including the remote ends of connections.

If you cannot rectify the fault, contact your supplier, giving the following information:

- ☐ The module serial number (marked on the bottom module ejector).
- ☐ The revision number (marked on the module board).
- ☐ A brief description of the fault.

Your supplier will advise you on your next course of action.

LinkBuilder

The LinkBuilder MSH FDDI 6 Port UTP Module 3C18301 User Guide

Storage space is available for this guide underneath the LinkBuilder MSH chassis