

## Specifications:

Case size dimensions: 5.75" x 2.5" x 1.0" (146 mm x 64 mm x 25 mm)

Fiber Connection: ST type connectors (SMA type available upon request)

Fiber Optic Cable Maximum Distance: 2,000 meters (6,600 feet)

Fiber Optic Cable Recommended: 62.5/125  $\mu\text{m}$  single mode fiber

Fiber Optic Transmitter Power: Average power: -20 dBm MIN

Fiber Optic Receiver Power: Average sensitivity: -32.5 dBm MIN

Bit error rate:  $\leq 10^{-9}$

The maximum dBm loss for the fiber cable should not exceed 8.2 dBm.

AUI Port: DB-15 with locking posts.

AUI Maximum Distance: 50 meters (165 feet)

Environment: 0–50 degrees C,  
10–90% humidity, non-condensing,  
0–10,000 foot altitude

Warranty: Five years

## Compliance Information

UL Listed

C-UL Listed (Canada)

CISPR/EN55022 Class A

## FCC Regulations

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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

## Canadian Regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

## European Regulations

### Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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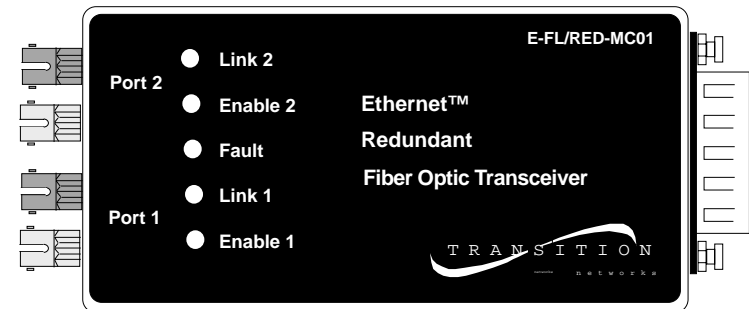
Minneapolis, MN 55344 USA

# Ethernet™ Redundant Fiber Optic Transceiver

## E-FL/RED-MC01, E-FL/RED-MC01(SMA)

### USER'S GUIDE

The Transition Networks Ethernet™ Redundant Fiber Transceiver (E-FL/RED-MC01, E-FL/RED-MC01(SMA)) connects Ethernet IEEE 802.3 AUI (DB-15) to a redundant fiber optic medium using standard ST type connectors (SMA available).



The Ethernet™ Redundant Fiber Transceiver operates in the following manner:

1. Unit is powered ON with Port 1 active.
2. Port 1 remains active as long as Link 1 is good AND data is NOT driven into Port 2.
3. If Link 1 fails OR if data is driven into Port 2, the redundant feature switches to Port 2 active.
4. Port 2 remains active as long as Link 2 is good AND data is NOT driven into Port 1.
5. The redundant feature switches to Port 1 active when Link 1 is good AND Port 1 is active OR when Link 2 is not good.

When power is applied through the AUI, status LEDs provide the following information:

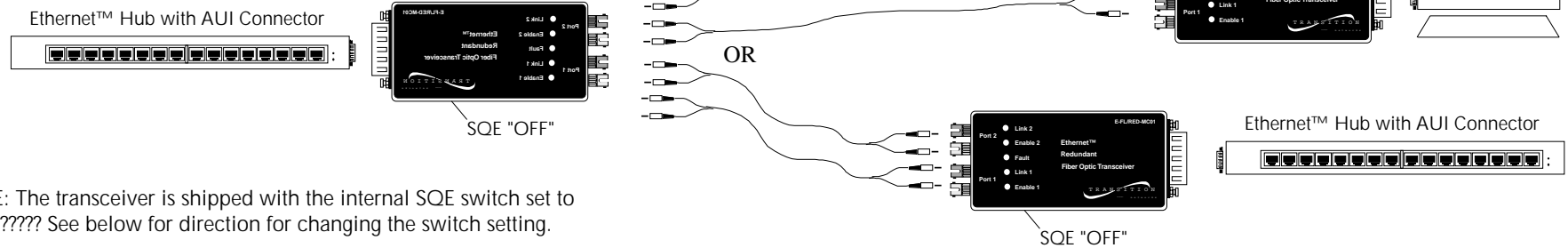
**Link(1&2):** Illuminated green LED indicates established link. (Both can be illuminated.)

**Enable(1 or 2):** Illuminated green LED indicates link on which packets are being transmitted and received.

**Fault:** Illuminated red LED indicates neither link is functional.

# Using the Fiber Optic Transceiver

The transceiver can be used to attach a 10BASE-T hub, through another transceiver, to a terminal device or to another 10BASE-T hub.



NOTE: The transceiver is shipped with the internal SQE switch set to OFF.????? See below for direction for changing the switch setting.

**SQE ON:** Set the (internal) SQE switch to enabled (ON) when the transceiver is connected to a terminal device.

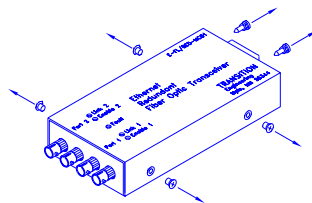
**SQE OFF:** Set the (internal) SQE switch to disabled (OFF) when the transceiver is connected to a hub.

## Installation Notes

**CAUTION:** Wear a grounding device and observe electrostatic discharge precautions when setting SQE switch. Failure to observe this caution could result in media converter failure.

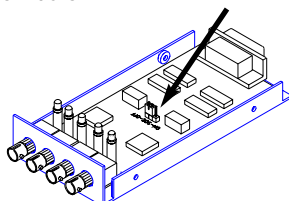
The SQE jumper is located inside the metal case of the Redundant Fiber Optic Transceiver.

With a medium Phillips screwdriver, remove the screws from the sides and back of the transceiver.



Remove the cover and locate the SQE jumper, as shown in the illustration below.

Place the SQE jumper in the proper (ON or OFF) location.



## Troubleshooting the Media Converter

If the E-FR/RED-MC01 fails, determine the answers to the following questions:

1. Is ANY LED on the E-FL/RED-MC01 illuminated?

**NO**

- Verify that the E-FL/RED-MC01 is installed properly in the AUI port and that the device to which the E-FL/RED-MC01 is attached is powered ON.
- Contact Technical Support at (800) 260-1312 or at (800) LAN-WANS.

**YES**

- Proceed to step 2.

2. Is the Link LED illuminated?

**NO**

- Check fiber cables for proper connection.
- Verify that TX and RX cables on one media converter are connected to RX and TX ports, respectively, on the other media converter.
- Contact Technical Support at (800) 260-1312 or at (800) LAN-WANS.

**YES**

- Contact Technical Support at (800) 260-1312 or at (800) LAN-WANS.

2. Is the Fault LED illuminated?

**YES**

- Contact Technical Support at (800) 260-1312 or at (800) LAN-WANS.

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