

# MEDIA CONVERTER TECHNICAL SPECIFICATIONS

<b>Standards</b>	ATM UNI 3.1 #AF-PHY-0015	
<b>Case dimensions</b>	3.9" x 3.0" x 1.0"	(99mm x 76mm x 25mm)
<b>Environment</b>	Temperature:	0-40°C (32° to 104° F)
	Humidity	10-90%, non condensing
	Altitude	0-10,000 feet
<b>Warranty</b>	Lifetime	

**Power Supply Requirements** Replace power supply with only the equivalent input rating (see below) and output rating (regulated 9VDC at 0.5 A).

<u>TN PN</u>	<u>Requirement</u>	<u>Location</u>
3517	240 volts, 50 hertz	United Kingdom
3516	230 volts, 50 hertz	Europe
3518	120 volts, 60 hertz	USA/Canada/Mexico
3514	100 volts, 50-60 hertz	Japan
3515	240 volts, 50 hertz	Australia



**CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.**

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EG-Mitgliedstaaten verstößt gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

## Compliance Information

UL Listed  
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.

## Copyright Restrictions

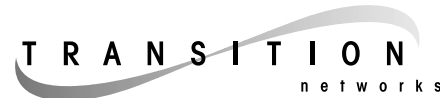
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## Trademark Notice

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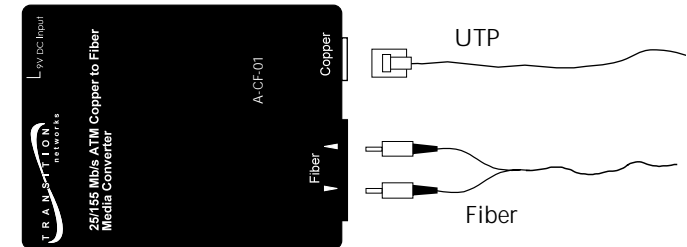
Minneapolis, MN 55344 USA

# 25/155 Mb/s ATM Copper-to-Fiber Media Converter

A-CF-01, A-CF-01(SM)

## USER'S GUIDE

The TRANSITION Networks ATM (Asynchronous Transfer Mode) copper-to-fiber media converters connect twisted-pair copper cable network segments to **multimode** fiber optic cable network segments (using A-CF-01) OR to **singlemode** fiber optic cable network segments (using A-CF-01(SM)).



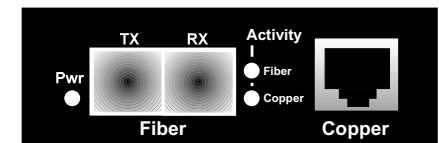
The ATM media converters provide network connection using an RJ-45 twisted-pair ATM connector and a set of RX (receive) and TX (transmit) SC-type ATM fiber connectors. NOTE: Effective cable distances are determined by ambient RF noise and by signal loss in the cable. The fiber connection, with low signal loss and high resistance to radio frequency noise, allows extended distances between ATM devices. Twisted-pair runs are best kept as short as possible to preserve signal integrity.

Status LEDs on the connector side of the media converter provide the following information:

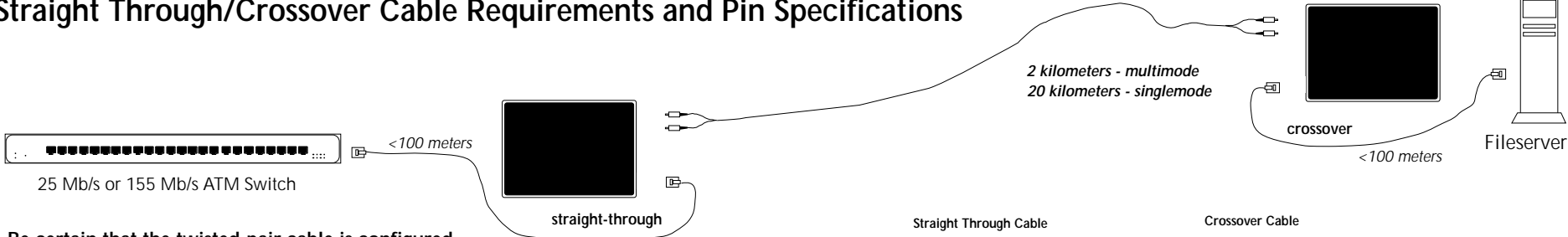
**Pwr** (Power) Illuminated green LED indicates connection to external AC power.

**Activity (Fiber)** Steady green LED indicates the fiber port is active.

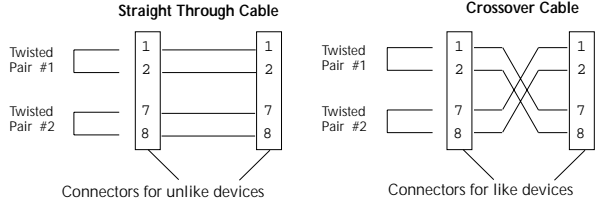
**Activity (Copper)** Steady green LED indicates the twisted-pair port is active.



# Straight Through/Crossover Cable Requirements and Pin Specifications



Be certain that the twisted-pair cable is configured correctly (straight through or crossover) for site. Cable connections between an ATM switch and the media converter must be configured as **straight through**. Cable connections between the media converter and a NIC must be configured as **crossover**.



The two active pairs in an ATM network are pins 1 & 2 and pins 7 & 8. Use only dedicated wire pairs (such as blue/white & white/blue, orange/white & white/orange) for the active pins.

## Installation Notes

- **KEEP TWISTED-PAIR RUNS AS SHORT AS POSSIBLE.**
- Connect the power supply cable to the media converter BEFORE connecting to the outlet.
- Install unit with PSU provided. (Output 9 VDC regulated, 500 mA).

## Troubleshooting the Media Converter

If the ATM media converter fails, determine the answers to the following questions:

1. Is the power LED on the media converter illuminated?
  - NO**
    - Is the power adapter the proper type of voltage and cycle frequency for your AC outlet? NOTE: Refer to the "Power Supply Requirements" on the back page.
    - Is the power adapter properly installed in the media converter and in the outlet?
    - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.
  - YES**
    - Proceed to step 2.
2. Is the TX Activity LED illuminated?
  - NO**
    - Check UTP cables for proper connection and pin assignment. (See above.)
    - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.
  - YES**
    - Proceed to step 3.
3. Is the Fiber Activity LED illuminated?
  - NO**
    - Check fiber cables for proper connection.
    - Verify that TX and RX cables on media converter are connected to RX and TX ports, respectively, on the other 100BASE-FX device.
    - Refer to Tech Tips available at: <http://www.transition.com>
    - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.
  - YES**
    - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.

## ATM CABLE SPECIFICATIONS

The physical characteristics of the media cable must meet or exceed the specifications: ATM UNI 3.1 #AF-PHY-0015  
 Maximum number of media converters in series: 2

### COPPER CABLE SPECIFICATIONS

Category 5 wire or better is required. Either shielded twisted-pair (STP) or unshielded twisted-pair (UTP) can be used. DO NOT USE FLAT OR SILVER SATIN WIRE.

#### Category 5:

Gauge	24 to 22 AWG
Attenuation	20 dB/1000' @ 10 MHz
Impedance	100 Ω ±10% @ 10 MHz

#### Maximum Cable Distance:

100 meters (330 feet)

### FIBER CABLE SPECIFICATIONS

#### SINGLEMODE

Fiber Optic Cable Recommended:	9 μm singlemode fiber
Fiber Optic Transmitter Power:	min: -15.0 dBm    max: -8.0 dBm
Fiber Optic Receiver Sensitivity:	min: -31.0 dBm    max: -8.0 dBm
Wavelength:	1300nm
Bit error rate:	≤10 <sup>-9</sup>
Maximum Cable Distance:	20 kilometers

#### MULTIMODE

Fiber Optic Cable Recommended:	62.5 / 125 μm multimode fiber
Optional:	100 / 140 μm multimode fiber 85 / 125 μm multimode fiber 50 / 125 μm multimode fiber
Fiber Optic Transmitter Power:	min: -19.0 dBm    max: -14.0 dBm
Fiber Optic Receiver Sensitivity:	min: -30.0 dBm    max: -14.0 dBm
Wavelength:	1300nm
Bit error rate:	≤10 <sup>-9</sup>