

Media converter Technical Specifications

Standards	ATM UNI 3.1 #AF-PHY-0015
Case dimensions	4.75" x 3.0" x 1.0" (119mm x 76mm x 25mm)
Shipping Weight	2 pounds (0.9 kilograms)
Environment	Temperature: 0-40°C (32° to 104° F) Humidity: 10-90%, non condensing Altitude: 0-10,000 feet
Warranty	Five years

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

TN PN	Requirement	Location
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.



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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.

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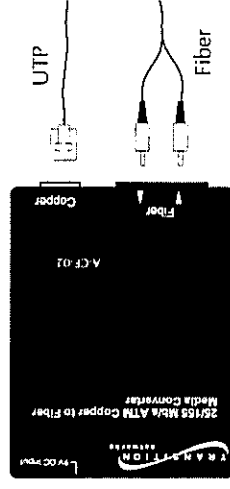
25/155 Mb/s ATM Copper-to-Fiber Media Converter

A-CF-02, A-CF-02(SM)

USER'S GUIDE

The TRANSITION Networks ATM (Asynchronous Transfer Mode) copper-to-fiber media converters connect twisted-pair copper cable to **multimode** fiber optic cable (A-CF-02) OR to **singlemode** fiber optic cable (A-CF-02(SM)).

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.



A-CF-02

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** connector to **multimode** fiber-optic cable.

A-CF-02(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** connector to **singlemode** fiber-optic cable.

STATUS LEDs

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

Pwr

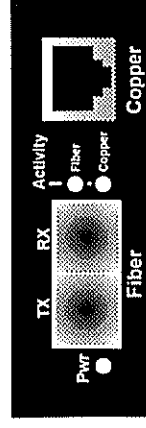
(Power) Illuminated green LED indicates connection to external AC power.

Activity (Fiber)

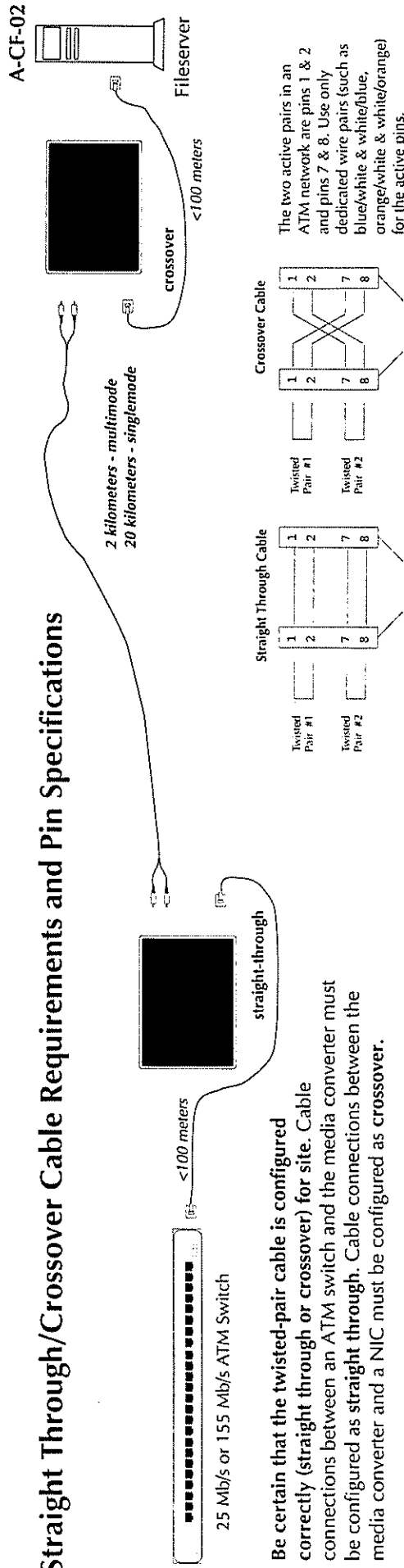
Steady green LED indicates the fiber port is active.

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**.

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 Copper 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 $\pm$ 10% @ 10 MHz
Maximum Cable Distance:	100 meters (330 feet)

Fiber Cable Specifications

Singlemode

Fiber Optic Cable Recommended:	9 μ m 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:	$\leq 10^{-9}$
Maximum Cable Distance:	20 kilometers

multimode

Fiber Optic Cable Recommended:	62.5 / 125 μ m multimode fiber
Optional:	100 / 140 μ m multimode fiber
	85 / 125 μ m multimode fiber
	50 / 125 μ m 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:	$\leq 10^{-9}$
Maximum Cable Distance:	2 kilometers