

MEDIA CONVERTER TECHNICAL SPECIFICATIONS

| | | |
|-----------------|---|-------------------------|
| Standards | ANSI/ATA 878 | |
| Delay | 300ns one-way | |
| 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 0.2 A).

| TN PN | Requirement | Location |
|-------|------------------------|-------------------|
| 3525 | 240 volts, 50 hertz | United Kingdom |
| 3525 | 230 volts, 50 hertz | Europe |
| 3518 | 120 volts, 60 hertz | USA/Canada/Mexico |
| 3514 | 100 volts, 50-60 hertz | Japan |
| 3525 | 240 volts, 50 hertz | Australia |

NOTE: This product also can be powered by the Transition Networks E-MCR series media converter rack.

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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33095.B



Minneapolis, MN 55344 USA

ARCNET® Coax Copper/Fiber Media Converter

AR-CF-02, AR-CF-02(SC), AR-CF-02(SM)

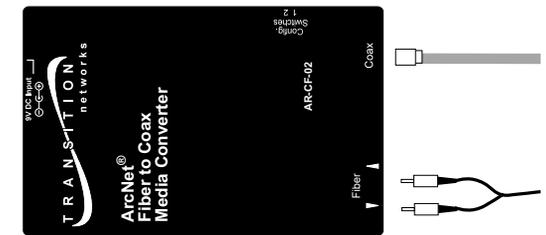
USER'S GUIDE

The TRANSITION Networks ARCNET® Coax Copper/Fiber Media Converter (AR-CF-02) extends the signal distance of an ARCNET® segment or node link up to 2 kilometers over fiber*, up to 600 meters over coax cable in a star topology, and up to 300 meters over coax cable in a bus topology.

A switch on the media converter allows the media converter to be used to terminate the link or node signal.

AR-CF-02

Provides a BNC connector to coaxial cable and a set of RX (receive) and TX (transmit) ST connectors to multimode fiber-optic cable.



AR-CF-02(SC)

Provides a BNC connector to coaxial cable and an RX (receive) and TX (transmit) SC connector to multimode fiber-optic cable.

AR-CF-02(SM)

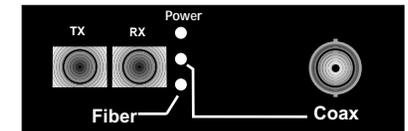
Provides a BNC connector to coaxial cable and an RX (receive) and TX (transmit) SC connector to singlemode fiber-optic cable.

STATUS LEDS

Power Steady green LED indicates connection to external AC power.

Coax Blinking green LED indicates network traffic on coaxial cable link.

Fiber Blinking green LED indicates network traffic on fiber link.



*Consider carefully the network constraints imposed by the maximum latency response time of installed equipment. Some equipment cannot handle the extended response time that 2 kilometers of fiber introduces.

Installation NOTES

Install Coax Copper

STAR TOPOLOGY

- MAXIMUM coax segment to active hub is 600 meters (2000 feet) on RG-62 cable; minimum does not apply.

BUS TOPOLOGY

- Devices attached to coax bus must be located AT LEAST six (6) feet apart.
- MAXIMUM coax bus length is 300 meters (1000 feet); minimum is 1.8 meters (6 feet).
- Device(s) attached to EACH END of bus must be terminated.
NOTE: If the media converter is installed at one end of the bus, use the configuration switch to terminate the media converter.

CONFIGURATION SWITCH

NOTE: Set configuration switch (located on the side of media converter) according to site installation requirements:

| | | |
|----------|-----------|------------------------------------|
| Switch 1 | NOT USED | |
| Switch 2 | UP = OFF | Media converter TRANSFERS signal |
| | DOWN = ON | Media converter TERMINATES signal. |

Install Fiber

- Connect one end of *first* fiber cable to AR-CF-02 media converter **TX** connector.
- Connect other end of *that* fiber cable to *second* AR-CF-02 media converter **RX** connector.
- Connect one end of *second* fiber cable to AR-CF-02 media converter **RX** connector.
- Connect other end of *that* fiber cable to AR-CF-02 media converter **TX** connector.

Power

- Locate correct power supply adapter for site installation.
- Connect media converter power connector at end of power supply adapter cord to AR-CF-02 media converter power receptacle.
- Connect 2-prong or 3-prong external power connector on other end of power supply adapter cord to external AC power.

CABLE SPECIFICATIONS

The physical characteristics of the cable must meet or exceed the following:

FIBER CABLE

MULTIMODE

| | | |
|-----------------------------------|------------------------------------|----------------|
| Fiber Optic Cable Recommended: | 62.5 / 125 μ m multimode fiber | |
| Fiber Optic Transmitter Power: | min: -19.0 dBm | max: -14.0 dBm |
| Fiber Optic Receiver Sensitivity: | min: -32.5 dBm | max: -14.0 dBm |
| Wavelength: | 850nm | |
| Bit error rate: | $\leq 10^{-9}$ | |
| Maximum Cable Distance: | 2 kilometers | |

SINGLEMODE

| | | |
|-----------------------------------|----------------------------|----------------|
| Fiber Optic Cable Recommended: | 9 μ m singlemode fiber | |
| Fiber Optic Transmitter Power: | min: -27.0 dBm | max: -17.0 dBm |
| Fiber Optic Receiver Sensitivity: | min: -32.5 dBm | max: -13.0 dBm |
| Wavelength: | 1300nm | |
| Bit error rate: | $\leq 10^{-9}$ | |
| Maximum Cable Distance: | 8 kilometers | |

COAX CABLE/STAR TOPOLOGY

RG-62 Cable

| | |
|------------------------------|------------------------------|
| Cable Characteristics: | |
| Cable type: | Coaxial RG-62/u |
| Impedance: | 75 Ω @ 10 MHz |
| Mutual Capacitance: | 13 pF/ft $\pm 20\%$ @ 10 MHz |
| Maximum Attenuation: | 5.5 dB/1000 feet |
| Maximum Cable Distance: | 600 meters (2000 feet) |
| Minimum Distance/Connection: | 0 meters (0 feet) |

RG-59 Cable

| | |
|------------------------------|------------------------------|
| Cable Characteristics: | |
| Cable type: | Coaxial RG-59/u |
| Impedance: | 93 Ω @ 10 MHz |
| Mutual Capacitance: | 13 pF/ft $\pm 20\%$ @ 10 MHz |
| Maximum Attenuation: | 7.0 dB/1000 feet |
| Maximum Cable Distance: | 450 meters (1500 feet) |
| Minimum Distance/Connection: | 0 meters (0 feet) |

COAX CABLE/BUS TOPOLOGY

RG-62 Cable

| | |
|------------------------------|------------------------------|
| Cable Characteristics: | |
| Cable type: | Coaxial RG-62/u |
| Impedance: | 93 Ω @ 10 MHz |
| Mutual Capacitance: | 13 pF/ft $\pm 20\%$ @ 10 MHz |
| Maximum Attenuation: | 5.5 dB/1000 feet |
| Maximum Cable Distance: | 300 meters (1000 feet) |
| Minimum Distance/Connection: | 1.8 meters (6 feet) |