MEDIA CONVERTER TECHNICAL SPECIFICATIONS

Standards	100BASE-SX, IEEE 802.3u
Delay	400ns round trip
Case dimensions	4.7" x 3.0" x 1.0" (119mm x 76mm x 25mm)
Shipping Weight	3 lbs (0.9 kg)

Environment

Temperature:	0-40°C (32° to 100° F)
Humidity	10-90%, non condensing
Altitude	0-10,000 feet

**Maximum number
  media converters in series:** 2

Warranty Lifetime

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
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.

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 öffentlickes Telekommunikationsnetz in den EG-Mitgliedstaaten verstösst gegen die jeweligen 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
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.

Copyright Restrictions

Trademark Notice
All registered trademarks and trademarks are the property of their respective owners.

33064.C

TRANSITION networks

Minneapolis, MN 55344 USA

100BASE-TX/100BASE-SX *Media Converters*
## *850 Nanometer*
E-100BTX-SX-01, E-100BTX-SX-01(SC)
USER'S GUIDE

The TRANSITION Networks Ethernet™ E-100BTX-SX-01 series 100BASE-TX to 100BASE-SX media converters connect 100BASE-TX unshielded twisted pair cable to *850 nm* 100BASE-SX *multimode* fiber-optic cable, using either an ST connector (E-100BTX-SX-01) or an SC connector (E-100BTX-SX-01(SC)).

A four-positiion switch on the media converter allows selection of Auto-negotiation, half-duplex or full-duplex, and/or Link Pass Through (LPT) /Remote Fault Detection (RFD). An MDI/MDI-X switch allows *straight-through* twisted-pair cable to be used for *crossover* 100BASE-TX connections.
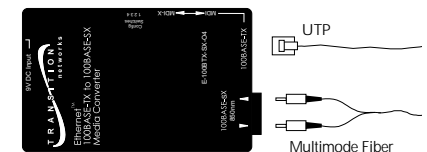
E-100BTX-SX-01
*Provides an RJ-45 twisted pair 100BASE-TX connector and a set of RX (receive) and TX (transmit) **ST** 100BASE-SX connectors to **850 nm multimode** fiber-optic cable.*
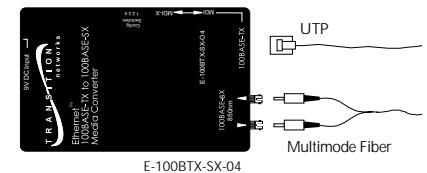
E-100BTX-SX-04

E-100BTX-SX-01(SC)
*Provides an RJ-45 twisted pair 100BASE-TX connector and an RX (receive) and TX (transmit) **SC** 100BASE-SX connector to **850 nm multimode** fiber-optic cable.*

E-100BTX-SX-04(SC)

Status LEDs on the connector side of the media converters indicate:

Power	Illuminated green LED indicates connection to external AC power.
SDF	Signal Detect/Fiber: Steady green LED indicates fiber port is connected to device.
SDC	Signal Detect/Copper: Steady green LED indicates RJ-45 port is connected to device.
RXC	Receive/Copper: Flashing green LED indicates packets are seen on RJ-45 port.
RXF	Receive/Fiber: Flashing green LED indicates packets are seen on fiber port.
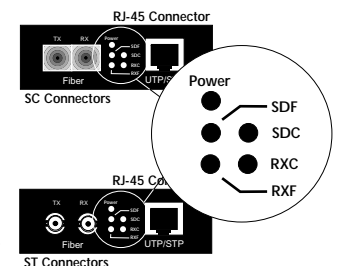
Switch Settings and Cable Requirements

100 meters

2 kilometers - multimode

100 meters

MDI switch setting

MDI-X switch setting

MDI/MDI-X Straight-Through/Crossover

Straight-through/crossover 100BASE-TX requirements are satisfied using the MDI/MDI-X switch with straight-through cable.

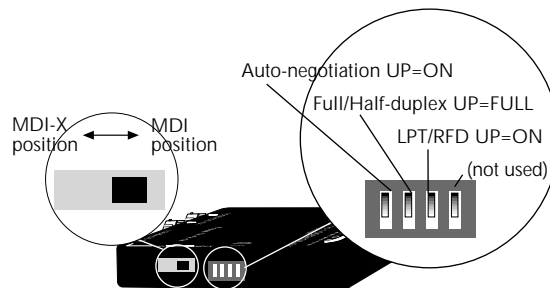Set the MDI/MDI-X switch to MDI for cable connections between hub and media converter.
Set the MDI/MDI-X switch to MDI-X for cable connections between media converter and terminal, transceiver or NIC.
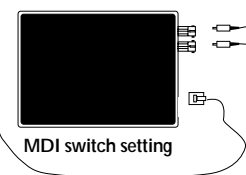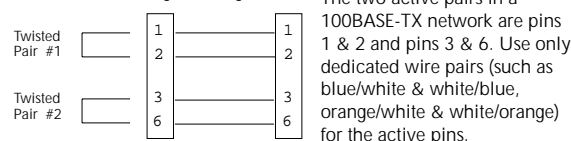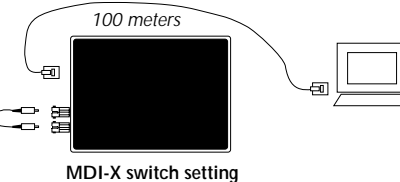
Setting Switches

Use small flatblade screwdriver or similar device to set recessed switches. Refer to label on top of media converter for MDI/ MDI-X switch settings. Refer to drawing at left for four-position switch settings.

MDI-X position ⟷ MDI position

Auto-negotiation UP=ON
Full/Half-duplex UP=FULL
LPT/RFD UP=ON
(not used)

Straight Through Cable

Twisted Pair #1
Twisted Pair #2

1	1
2	2
3	3
6	6

The two active pairs in a 100BASE-TX network are pins 1 & 2 and pins 3 & 6. Use only dedicated wire pairs (such as blue/white & white/blue, orange/white & white/orange) for the active pins.

4-Position Switch (4th switch not used)

Auto-negotiation (UP) Detects and adapts to line speed/operation mode of attached device.
Full/Half-duplex (UP) Allows an attached full-duplex station to transmit and receive simultaneously. (DOWN) Allows an attached station to transmit and receive sequentially.
LPT/RFD (UP) Blinks the *SDF* or *SDC* LED if a malfunction is detected at the unit to which the media converter is attached.

Installation Notes

- **DO NOT CONNECT MEDIA CONVERTERS BETWEEN HUBS.**
- **KEEP TWISTED PAIR RUNS AS SHORT AS POSSIBLE.**
- **Be certain that the 100BASE-TX MDI/MDI-X switch is set correctly for site installation.**
- Install unit with power supply unit provided. (Output 9 VDC regulated, 500 mA).
- Connect the power supply cable to the media converter BEFORE connecting to outlet.
- Install no more than two (2) media converters in series.

Troubleshooting the Media Converter

1. Is the power LED on the media converter illuminated?
   NO
   - Is the power adapter the proper type of voltage and cycle frequency for AC outlet?
   - 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 100BASE-SX SDC LED illuminated?
   NO
   - Check UTP cables for proper connection and MDI/MDI-X switch position. (See above.)
   - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.

   YES
   - Proceed to step 3.
3. Is the fiber SDF 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-SX device.
   - Refer to Tech Tips available at: http://www.transition.com
   - Contact Technical Support at (800) 260-1312/ (800) LAN-WANS.

   YES

Ethernet Cable Specifications

The physical characteristics of the media cable must meet or exceed IEEE 802.3u 100BASE-TX and IEEE 802.3z 100BASE-SX specifications.

100BASE-TX 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)

100BASE-SX Cable Specifications

MULTIMODE

Fiber-optic Cable Recommended:	62.5 / 125 µm multimode fiber
Optional:	50 / 125 µm multimode fiber
Modal bandwidth:	≤160MHz-Km
Fiber-optic Transmitter Power:	min: -20 dBm max: -12 dBm
Fiber-optic Receiver Sensitivity:	min: -24 dBm max: -12 dBm
Wavelength:	850nM
Bit error rate:	$\leq 2.5^{-10}$
Maximum Cable Distance:	2-300 meters

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com