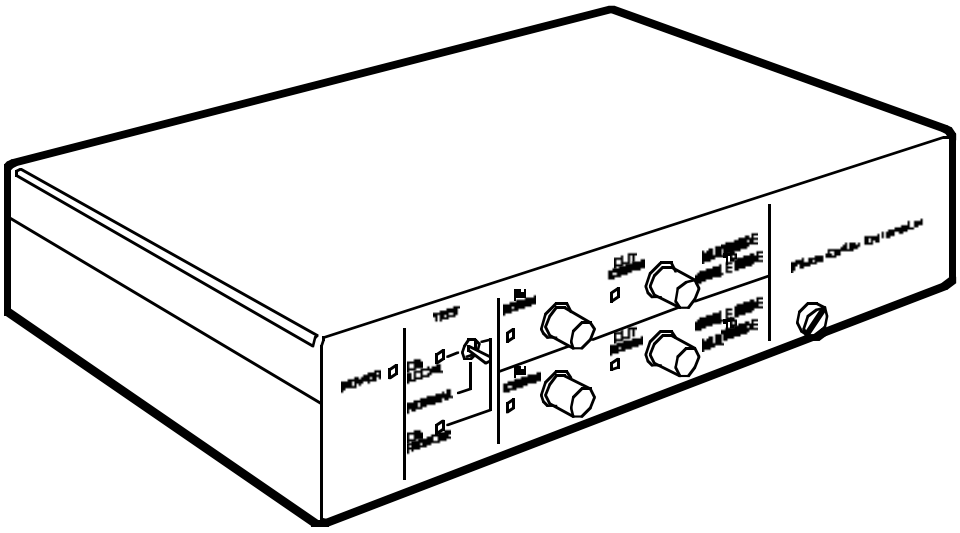
Fiber Optic Converter



Convert fiberoptic signals from single-mode to multimode fiber cable transparently.

Key Features

- *Use single-mode fibre between devices requiring multimode fibre.*
- *Local and remote loopback diagnostics comply with ITU V.54 standards.*
- *Transparent to all data rates from 30 Kbps to 250 Mbps.*
- *Front-panel controls and indicators tell you status at a glance.*
- *850-nm and 1300-nm multimode models available with 1300-nm single mode connections.*
- *Use alone to connect mismatched devices or in pairs to connect multimode devices over single-mode cable.*

Gain the noise immunity and distance limits of single-mode fibreoptic cable by using the Fibre Optic Converter with your multimode fibreoptic devices.

The Fibre Optic Converter supports Ethernet, FDDI, and Token Ring, plus other interfaces such as OC-1, TAXI, OC-3, and STM-1.

With a Fibre Optic Converter, you can connect multimode devices such as RS-232 multiplexors or LAN, ATM (SDH), SONET, or ESCON networks to the single-mode lines typical of Post, Telephone, and Telegraph companies (PTTs).

Two models are available:

- IC350A has a wavelength of 850 nm on the multimode side and 1300 nm on the single-mode side.
- IC351A has a wavelength of 1300 nm on both the multimode and single-mode sides.

Use one Fibre Optic Converter to connect two devices with dissimilar fibre modes. Use two Converters to connect two multimode devices over a single-mode fibreoptic link.

The Fibre Optic Converter zooms at speeds up to 250 Mbps.

The front panel of the Converter displays all of its controls and indicators, except for the power switch, which is located on the rear panel of the unit. The Converter features LEDs that light when a local or remote loopback test is running, or when traffic passes through the adjacent connector.

Troubleshooting's a snap with this Converter, too. It has built-in diagnostics featuring local and remote loopbacks in compliance with ITU V.54. Simply select the loopback you want via a front-panel switch.

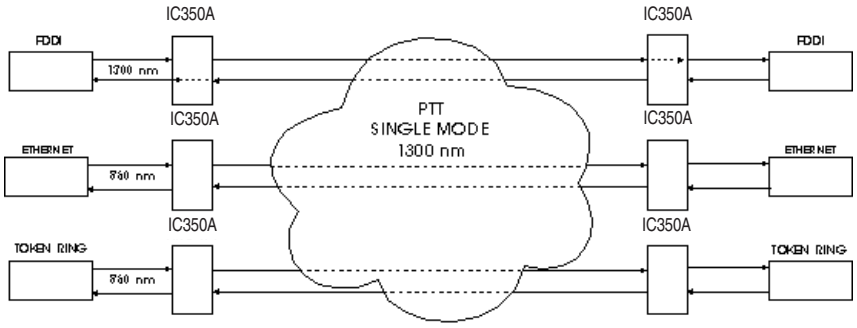
The Converters support unipolar two-level codes, such as NRZ, NRZI, RZ, and biphase (CDP, Manchester), but not bipolar (multi-level) codes (such as AMI or HDB3) or uncoded signals.

Plus, once it's powered on, the Converter operates unattended. You only need to intervene for testing or when the Converter encounters an error.

Typical Application

Connect a multimode fibreoptic device to a single-mode fibreoptic device via one Fiber Optic Converter.

Connect multimode devices to the single-mode fibreoptic lines used by Post, Telephone, and Telegraph (PTT) companies with a pair of Fibre Optic Converters.



Technically Speaking

Fibreoptic cable comes in two forms: single-mode and multi-mode.

- Single-mode fibre has a core diameter that's usually between 5 and 10 microns. This type of fibre is ideal for transmitting light signals over long distances.
- Multimode fibre has a core diameter of 50 to 100 microns. Its core causes some distortion between different modes of light propagation. Because of this, it provides less optical power than single-mode fiber, reducing the distance that light is capable of traveling through the cable.

You can use the Converters in two common applications:

- Use a pair of Converters to connect two devices that have multimode interfaces across a single-mode line, or
- Use one Converter to connect a multimode device to single-mode equipment.

Specifications

Protocol—Supported: Ethernet (10BASE-FL, FOIRL), FDDI (ANSI X3T9.5), Token Ring (IEEE 802.5J), ATM (OC-1, SONET, TAXI, OC-3, STM-1)

Interfaces—Single-mode and multimode

Cabling—Supports unipolar two-level codes such as NRZ, NRZI, RZ, or biphase (CDP or Manchester); does *not* support bipolar (multi-level) codes (such as AMI or HDB3) or uncoded signals

Speed—30 Kbps to 250 Mbps

Wavelength—Single-mode side: 1300 nm; Multimode side: IC350A: 850 nm, IC351A: 1300 nm

Optical Output—Single-mode side: -18 dBm into 9/125 fiber; Multimode side: -22 dBm into 50/125 fiber;, -18 dBm into 62.5/125 fiber, -14 dBm into 100/140 fiber

Receiver Sensitivity— -32 dBm on both interfaces

Dynamic Range—20 dB for both interfaces

User Controls—(1) Rear-mounted POWER rocker switch, (1) Front-mounted TEST toggle switch

Diagnostics—V.54-compliant loopback tests

MTBF—Approx. 80,000 hours

Humidity—Up to 90% noncondensing

Indicators—POWER, TEST, ON, MODE SELECTOR, REMOTE TEST, (4) Connector (TX, RX)

Connectors—(4) Front-mounted ST® female for data; (1) Rear-mounted IEC 320 male for power

Power—90-260 VAC, 47-63 Hz, 6 watts

Size—1.7"H x 8.5"W x 9.5"D (4.3 x 21.6 x 24.1 cm)

Weight—2.4 lb. (1.1 kg)

Additional equipment you may need:

- Single-mode fibreoptic cable
- Multimode fibreoptic cable

For these and other components...

Call our expert Technical Support Staff for all your LAN needs. They'll help you find the best equipment for your application.

Ordering Information

This information will help you place your order quickly.

PRODUCT NAME	ORDER CODE
Fibre Optic Converter	
850 nm	IC350A
1300 nm	IC351A