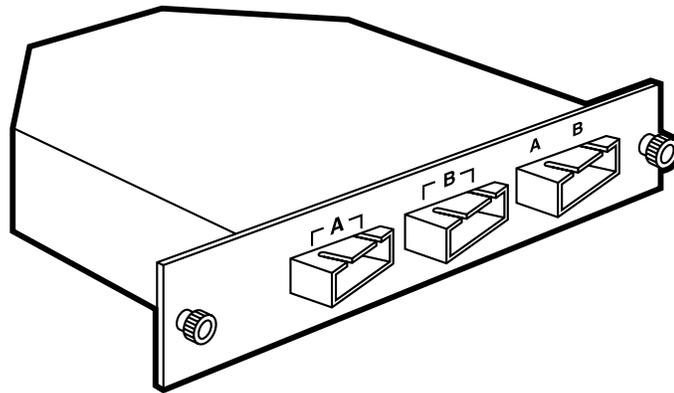# Fiber Optic Splitter Module

Overview and Installation

The Fiber Optic Splitter Module monitors network traffic flowing in either direction on a fiberoptic network (Ethernet, Fast Ethernet, FDDI, ATM, and SONET) at data rates up to OC3 (155 Mbps). It has four ports. Data Ports A and B are each *dual* SC female 62.5/125-µm multimode fiberoptic connectors that can be attached to fiberoptic network devices (NICs, switches, routers, etc.). Analyzer Ports A and B are both carried on one dual SC female 62.5/125-µm multimode fiberoptic connector that can be attached to a LAN analyzer.

The splitter module is light, compact, and portable. You can also mount as many as three modules in a 19" equipment rack with our 3-Module Rackmount Kit (RM210; cover any open slots in the kit with Filler Blanks [RM211]). Run standard 62.5/125-µm multimode fiberoptic cable (with SC connectors on the module end) from the splitter module to the other devices. For the connection to the LAN analyzer, we recommend a Fiber Optic Analyzer Patch Cable (EFN4029-CT), shown below.
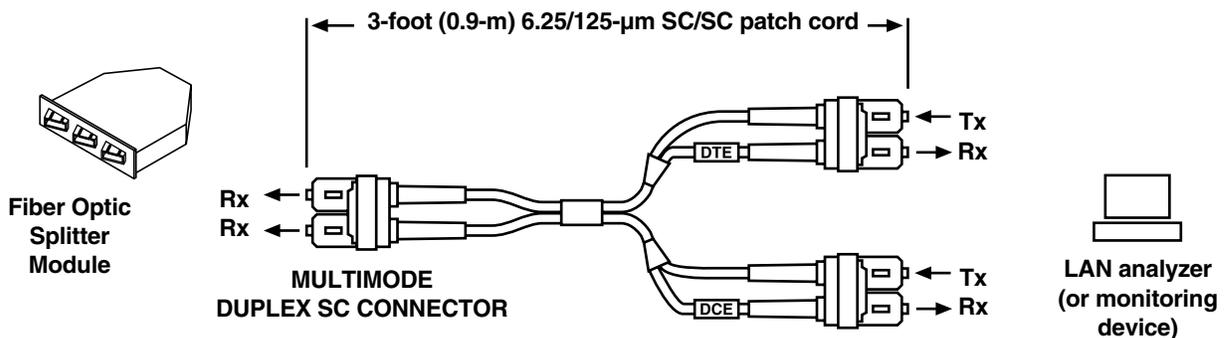

Figure 1. The Fiber Optic Analyzer Patch Cable (EFN4029-CT).

Operation

Once you've connected the other devices to the Fiber Optic Splitter Module, it will begin operating immediately. (It's a passive device and doesn't need to draw power from anywhere.) The splitter module can operate in either full or half-duplex mode. It taps the incoming data on either or both strands of your network's fiberoptic lines and sends 20% of the signal to the analyzer ports for performance evaluation and error detection (see Figures 2 and 3).

The tapped data is fed to the analyzer ports at network speed (up to OC3, 155 Mbps) and at normal signal levels. Signal integrity is guaranteed for the lines (the tapping will not affect either the signal integrity or loading factor); the splitter module regenerates incoming data from the network lines before retransmitting it.
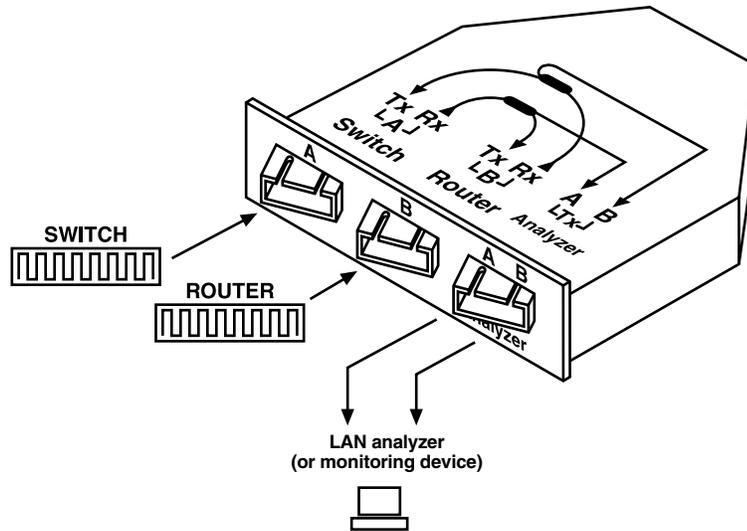

Figure 2. Attaching devices to the splitter module (internal data flow also shown).
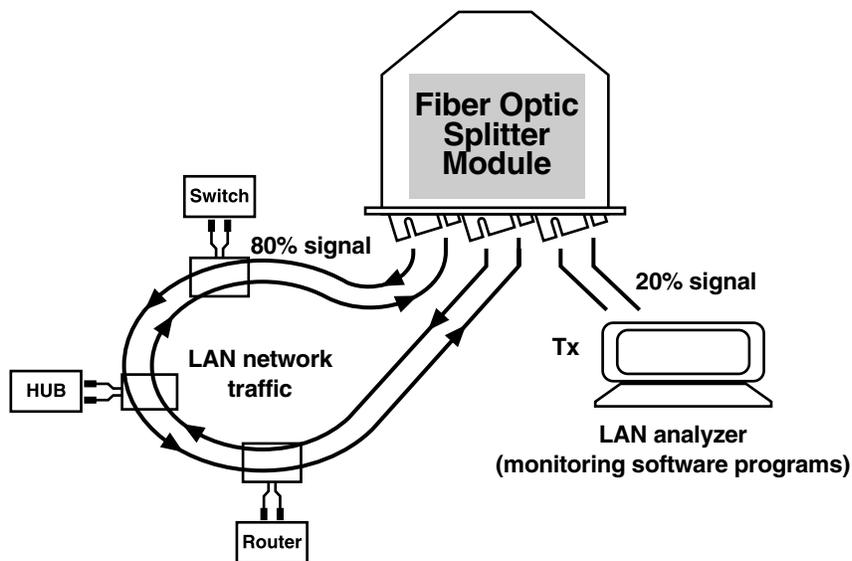

Figure 3. Total data flow when used in a ring network.

Specifications

Compliance:	CE
Compatibility:	LAN: 10BASE-FL Ethernet, 100BASE-FX Fast Ethernet, FDDI, ATM, and SONET; Optical wavelength: 850 and 1300 nm
Signal-Split Ratio:	80% to data ports, 20% to analyzer ports
Internal Loss Due to Signal Splitting:	Data ports: ≤ 2.2 dB; Analyzer ports: ≤ 7 dB
Cable-Insertion Loss:	≤ 0.35 dB
Polarization-Dependent Loss:	≤ 0.1 dB
MTBF:	Device is solid state; internal components should never spontaneously fail
Enclosure:	16-gauge cold-rolled steel
Interface:	6.5/125-µm multimode fiberoptic
Connectors:	(2) Dual ("duplex") SC female for network connections; (1) Dual SC female for monitoring connection (but the two sides of this connector function as two independent ports)
Indicators:	None
Temperature Tolerance:	Operating: -40 to +176˚F (-40 to +80˚C); Storage: -40 to +185˚F (-40 to +85˚C)
Humidity Tolerance:	Up to 85% noncondensing
Size:	1.2"H x 4.5"W x 5"D (3 x 11.4 x 12.7 cm)
Weight:	0.5 lb. (0.2 kg)