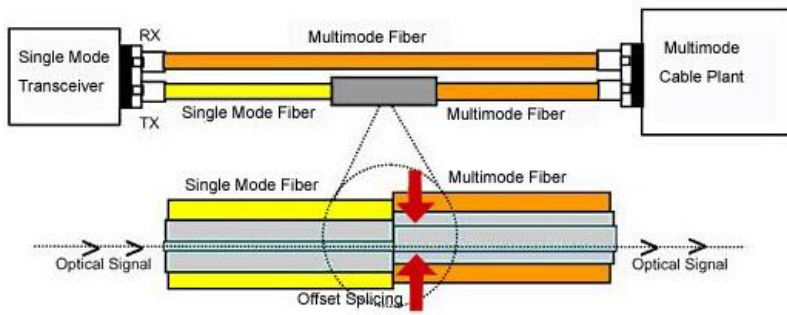


## Mode Conditioning Fibre Patch Cords

These are required when Singlemode Gigabit 1000BASE-LX routers and switches are used in existing multimode cable plants. They adapt the Singlemode output of Gigabit Ethernet (1000BASE-LX) transceivers to a multimode cable network. They are fully compliant with IEEE 802.3z application standards.



This interaction is achieved by, splicing in an offset manner, a section of Singlemode into the Transmitter leg of the Mode conditioning patch cord. The other leg of the mode conditioning patch cord is one length of multimode cable.

The side with both Multimode and Singlemode connects to the Transceiver, The Singlemode side being connected to the Transmitter. The dual Multimode side is connected to the cable Plant.

Mode conditioning patch cables are used in pairs, as each transmitter in the network needs mode-conditioning.

### Why Use Mode Conditioning Cords?

Transceiver used in Gigabit Ethernet (1000BASE-LX) only use single-mode wave lengths. If the existing fibre network uses multimode cables, we need to find a way to get the Singlemode network to operate over the Multimode.

Thus we used Mode conditioning cords to overcome this problem. When a Singlemode signal is transmitted into a multimode fibre, the phenomenon known as DMD (differential mode delay or dispersion occurs) occurs and can create multiple signals within the multimode fibre. (Multimode is graded Index fibre and Singlemode is stepped index fibre, thus there are multiple modes within MM fibre and one mode within SM).

This dispersion/DMD effect confuses the receiver and produces errors. But because of the off-set between the Multimode and Singlemode splice, the DMD is removed from the transmitted signal, meaning no multiple signals are transmitted.

### Ordering Information:

**Please contact atg for more detail and delivery times**