

## Mode Conditioning

By using a Mode Conditioning cables and a 1000Base-LX transceiver, you can extend the range of Gigabit over OM1 62.5/125 from 250m to 550m. Less commonly they are used to connect 1000Base-LX equipment to 50/125 cable.\*

### APPLICATIONS

- Use in place of standard equipment-to-cable plant patch cord
- IEEE-802.3z Gigabit Ethernet
- No large splice tube enabling small space installation

### FEATURES

- Overcomes distance limitations legacy OM1 fibre
- Extends Gigabit range up to 550m
- Enables 1000Base-LX/LH optics to be used with Multi-Mode Fibre

### BENEFITS

- 'Masks' Differential Mode Delay (DMD) effects
- Correct offset always maintained
- Aesthetically Pleasing
- Uses precision ceramic ferrules

### OPTIONS

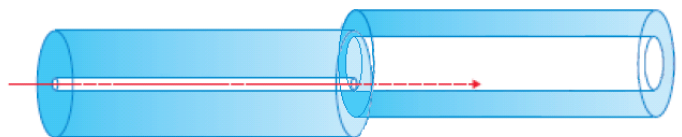
- Fibre Types - MC: OM1, OM2, OM3
- Multi Mode Connectors include SC, LC, MTRJ and ST
- Single Mode Connectors include SC, LC and MTRJ
- Custom Lengths

\* There is no technical benefit in doing so as you do not get a range improvement, and it may actually be cheaper to replace your LX optics with SX optics.



## How does it work?

The Mode Conditioning Patchcord is designed for long wave (-LX) multimode applications of Gigabit Ethernet and is compliant with this IEEE 802.3z application standard. This patch cord consists of connectors on each end of a cable assembly with a single-mode fibre offset to a multimode fibre connection point in between. The Singlemode connector is identified by a different colour connector boot.



Launching a single-mode laser into the centre of a multimode fibre can cause multiple signals to be generated that confuse the receiver at the other end of the fibre. These multiple signals are caused by mode imperfections resulting in intermodal delays and severely limit the cable distance lengths for operating Gigabit Ethernet. A mode conditioning patch cord reduces these multiple signals by allowing the single-mode launch to be offset away from the centre of a multimode fibre which is where most imperfections exist. By launching in a defined and precise part of the multimode cable, the signal excites a higher number of modes, reducing the impact of any manufacturing imperfections.