FIBERDYNE LABS
Fiber Optic
Networking Products

Application Note

Muxkit and Converter-Mux Introduction

<u>Keywords</u>

Application, Ethernet, Media Converter, Multiplex

<u>Summary</u>

The Muxkit is an all-in-one, full-duplex, Ethernet connection over a single fiber. The customer can either cut their fiber cost in half, or they can double their bandwidth (i.e. by trunking two switch connections over an existing pair of fibers). The Converter-Mux serves the same function, except the media converter and the Mux Cable Assembly are combined in one compact enclosure.
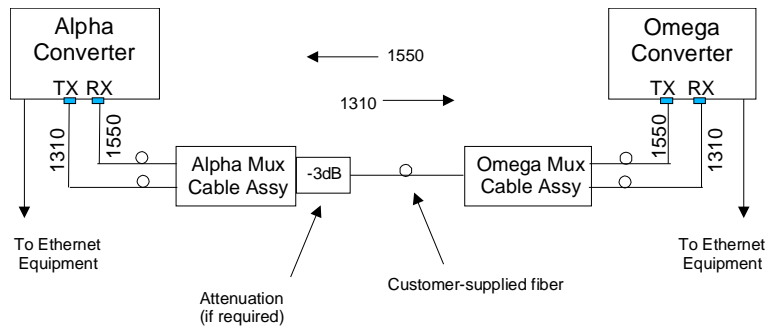
<u>Scenario</u>

Customer has only a single strand of fiber between sites, or they want to increase their bandwidth.

<u>Question</u>

What is a "Muxkit/Converter-Mux?"

<u>Notes/Answer</u>

The Muxkit includes all required components for a single-fiber, long-distance, Ethernet link. The customer merely supplies the connecting fiber between sites.

The kit combines the transmit and receive signals onto a single fiber. Two special, media converters are connected to the single fiber via two, different, Mux Cable Assemblies. The kit sends 1310 signals in one direction, while 1550 signals travel in the opposite direciton. The signals are multiplexed by WDMs, which are built into the Mux Cable Assembly. Eventually, each end's components will be built into an enclosure. This enclosure will have only one fiber connection.

Since two different wavelengths travel in different directions, we need two different Media Converters and two different Mux Cable Assemblies. One end is labeled "Alpha," and the other end is called "Omega" (i.e. the beginning and the end). The Alpha Media Converter must be connected to the Alpha Mux Cable Assembly. Similarly, the Omega components must be connected.

Note: one "Alpha" Converter-Mux plus one "Omega" Converter-Mux equals a Muxkit. The Converter-Mux is more convenient and more compact than the Muxkit components. The Mux Cable Assemblies are built-into each unit. Therefore, the installation is simpler.