



## Application Note

### 100Base Media Converters do not necessarily talk 10Base

#### Keywords

10Base, 100Base, Ethernet, Media Converter, Specifications, Speed, Switch

#### Summary

Not all Ethernet products are backward compatible (i.e. 100Base media converters do not work with 10Base equipment).

#### Scenario

Customer was unable to pass data across a link, which used two 100Base-TX to 100Base-FX Media Converters (p/n FTX-B63). The customer was using a 3Com Superstack II Hub 10 and a standard PC as link terminations.

#### Question

When the customer tested their equipment with a direct link, it passed data. However, when our media converters were installed, the link did not work. Why would the link fail to pass data?

#### Notes/Answer

The correct cables were used: crossover cable to the PC, standard cable to the hub. The "Power" and "Fiber Link" lights were illuminated. However, the "TP Link" lights would not illuminate.

Multiple cables were tested. The TP Link light remained dark. Directed customer to disconnect the fiber and to connect the media converter copper ports together. The TP Link lights illuminated. The media converters had good TP Link lights. Something is wrong with the copper link.

At Fiberdyne, Cliff Tucker and I tested various configurations of Ethernet devices. We simulated the customer's results, only when we connected to 10Base devices. I researched our product designs; our 100Base products are not, necessarily, backward compatible with 10Base devices. The customer was using 10Base equipment.

Our 100Base media converters have an "Auto Negotiate" switch, but it does not control transmission speed. This switch controls link establishment and related duplex operations. Our 100Base media converters strictly talk at 100Base (i.e. no speed conversion).

**Note:** our "10/100Base" products, like the 2-Port Switch, *will auto-negotiate* to either speed on the copper ports. Fiber ports are a single speed (e.g. 100Base).