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GPIB-ENET-100

CONNECTING A NATIONAL INSTRUMENTS ETHERNET DEVICE TO A NETWORK OTHER THAN 10BASE-T OR 100BASE-TX

National Instruments Ethernet products, such as the GPIB-ENET/100 and Ethernet-to-Serial controllers, connect directly to 10Base-T and 100Base-TX networks. However, Ethernet can use a variety of physical media. You can use an Ethernet media converter[1] to transparently connect the GPIB-ENET/100 or Ethernet-to-Serial device to Ethernet networks other than 10Base-T/100Base-TX. For example, Figure 1 shows an Ethernet device connected to an isolated coax network by using a crossover twisted-pair cable between the media converter and the Ethernet device.
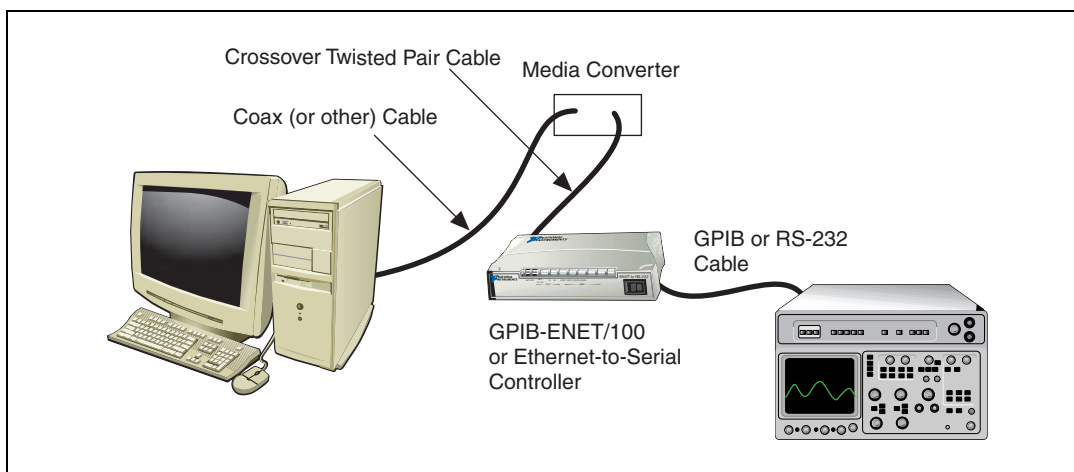

Figure 1. Coax to 10Base-T Diagram—Isolated Network Using Crossover Cable

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[1] National Instruments has tested various media converters and confirmed their electrical functionality. However, NI cannot assume responsibility for the compliance of any product not manufactured by NI. Some media converters available include the following: Trendware (ETHER-TC), Vnetek (CTP 100-T), Microsens (Media Converter 10Base-T/10Base-2), RAD (BE-1/M, BE-1/F), Aura Networks (Media Converter 10BTP to 10B2 Tinnet Coax). Note that many other companies also manufacture these devices.

The media converter capabilities apply to various types of conversions, whether with 10Base-2 (coax) as in Figure 1, with 100Base-FX (fiber optic), or with various other available cabling options to connect your 10Base-T/100Base-TX device to your existing Ethernet network. Figure 2 shows an example of using the standard twisted-pair cables to connect a GPIB-ENET/100 or Ethernet-to-Serial controller and a GPIB or Serial instrument to an existing network.
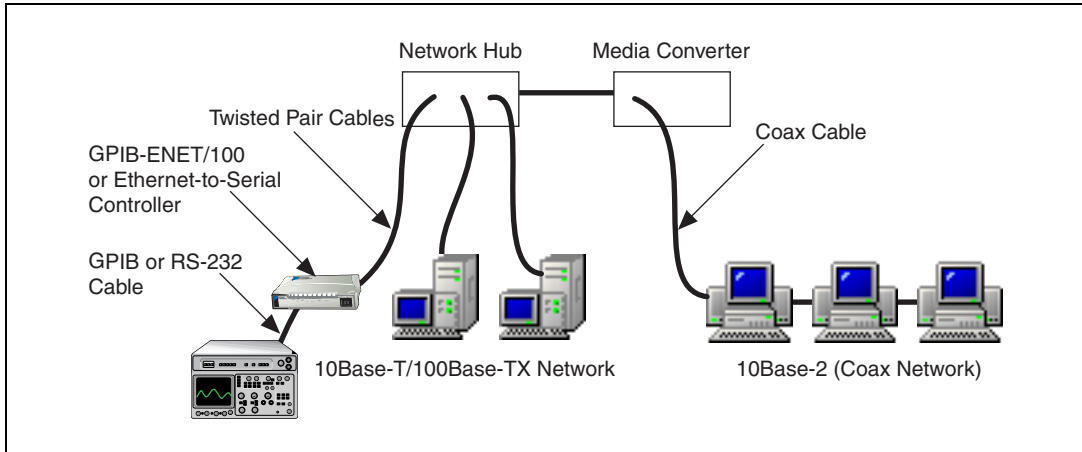

Figure 2. Coax to 10Base-T Diagram—Standard

There are many different configurations you could use. Refer to your MIS department for advice and specifics about your network configuration. For additional information on the available cables, including their specifications, go to ni.com and follow the links to **Product Catalog» Products and Services»GPIB»GPIB Cables/Accessories**.