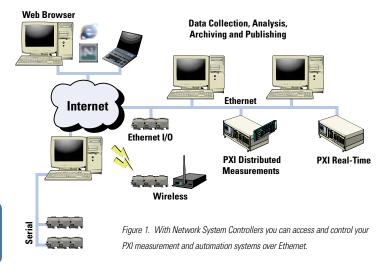
# **Ethernet Control of PXI**

# PXI Network System Controller Control PXI systems remotely Serve data on the Internet Distribute processing to multiple systems Remotely monitor and control measurement systems Standalone embedded operation

## **Overview**

The Network System Controller is ideal for Ethernet-based measurement systems that are controlled remotely, publish data, or are accessed over a network from one or more desktop or laptop PCs. With National Instruments PXI Network System Controllers, you can use standard Ethernet-based network technology to easily create simple point-to-point measurement applications or distributed measurement applications requiring multiple measurement and control nodes. The Network System Controllers consist of PXI embedded controllers with LabVIEW or LabVIEW Real-Time software. LabVIEW and LabVIEW Real-Time have built-in functionality for easily building and deploying networked measurement applications.



### **Serve Data on the Internet**

PXI embedded controllers with LabVIEW or LabVIEW Real-Time incorporate network technologies such as Ethernet, HTML, and the Internet, so you can bring the benefits of networks to your application. The Network system controllers provide Web-enabling technologies for your

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applications with advanced Internet requirements. You can view and control your measurement application using the Internet from any location in the world. Using a Network System Controller, you can publish data on the Web easily. The DataSocket capability in

LabVIEW and LabVIEW Real-Time enables you to communicate with different servers such as HTTP, FTP, OPC, and the DataSocket server. You can send data to another computer or PXI controller on a network or currently acquired data on another measurement node. You can publish your data anywhere in the world using the Network System Controller.

### **Distributed Processing**

For measurement systems that require a substantial amount of processing power, you can divide your measurement system among several PXI embedded controllers. The VI Server capability in LabVIEW ensures easy implementation of distributed systems. Using LabVIEW or LabVIEW Real-Time, you can create applications that can run independently in each PXI node, or as a part of an integrated network solution.

# **Ethernet Control of PXI**

# **Remote Control of Measurement Systems**

You can use the Network System Controller as a remote measurement system controlled via Ethernet. Using the Network System Controller, you can control data acquisition or instrument stations that are on your desktop, in remote regions, or in inaccessible and hazardous areas. LabVIEW and LabVIEW Real-Time

easily enable the network control of remote measurement stations. LabVIEW Remote Panels can be used to view and control any running VI over a network without additional programming. Also, you can use LabVIEW VI server to programmatically control VIs on a remote measurement station from a client PC.

Ordering Information Windows-based options
<b>Step 1. Controller Model</b> – Select one of the following configurations.
NI 8176 1.26 GHz Pentium III with
Windows 2000 (English)778468-01
NI 8175 866 MHz Pentium III with
Windows 2000 (English)778467-01
NI 8174 566 MHz Celeron with
Windows 2000 (English)778466-01
*Contact National Instruments or visit ni.com/pxiadvisor for the latest processors and

Step 2. NI Factory Installation Services – Select one of the following (required for Step 4).

operating systems, including Windows 2000 in Japanese, and other languages.

Step 3. Memory Upgrades – The NI 8176 and NI 8175 embedded controllers come with 128 MB of memory installed, and the NI 8174 embedded controller comes with 64 MB of memory installed. If you want to upgrade your memory, select the amount of memory.

### Step 4. Installed LabVIEW Application Software

Contact National Instruments for more information

**Step 5. Accessories** – Add the following accessories or, for additional peripheral modules, refer to the Bus Interfaces section of the print catalog starting on page 167.

External USB CD-ROM – Add on for easy software installation and upgrades

IEEE 1284 parallel port adapter cable ......182873-06

### **LabVIEW Real-Time options**

**Step 1. Controller Model** – Select one of the following models: NI 8176 RT (no operating system installed).............778468-33 NI 8175 RT (no operating system installed)............778467-33

**Step 2. Memory Upgrades** – If you want to upgrade your memory, select one or more of the following options:

Step 4. NI Application Development Tools – You can develop and deploy real-time applications using the LabVIEW Real-Time Module with either the LabVIEW Professional Development System or LabVIEW Full Development System. To receive your copy of these tools, select from the following: