## **Chapter Objectives**

## Overview of the 1203-CN1 ControlNet Communications Module

# Overview

Chapter 1 provides an overview of your 1203-CN1 ControlNet communications module. It provides the following information:

- Description of how the 1203-CN1 module works.
- Overview of ControlNet.
- Overview of SCANport products.
- Parts of the 1203-CN1 module.
- Overview of setting up the module.
- Required equipment and tools.

The 1203-CN1 ControlNet communications module provides an electronic communications interface between a ControlNet network and any single SCANport product.

#### Figure 1.1

### Example of 1203-CN1 Modules Connecting SCANport Products to ControlNet



A SCANport cable connects the module to a SCANport product through a SCANport interface port on the SCANport product. One or two ControlNet cable taps connect the module to the ControlNet bus, depending on whether you are using non-redundant or redundant connections. The module translates the ControlNet messages into SCANport messages that can be understood by the SCANport product. Both scheduled I/O data and unscheduled messages can be transferred through the module. ControlNet capability enhances the functionality and usefulness of the connected product and lets you communicate with the SCANport product from any node on the ControlNet network.

What Is ControlNet?ControlNet is a real-time, control-layer network providing high-speed<br/>transport of both scheduled time-critical I/O data and unscheduled<br/>messaging data, including upload/download of programming and<br/>configuration data and peer-to-peer messaging, on a single physical<br/>media link. Deterministic and repeatable, ControlNet's high-speed (5<br/>Mbps) control and data capabilities significantly enhance the size and<br/>speed of I/O data and messaging data transfers.

Specifically, ControlNet provides:

- Bandwidth for I/O, real-time interlocking, peer-to-peer messaging and programming—all on the same link, without impacting time-critical I/O.
- Deterministic, repeatable performance for both discrete and process applications.
- Multicast of both inputs and peer-to-peer data.
- Fiber media, media redundancy and intrinsically safe options.
- Simple and flexible installation requiring no special tools to install or tune the network.
- Network access for any node.
- Support for up to 99 nodes per subnet to help flatten architectures and support more distributed systems.
- User-configured real-time remote analog updates for more flexibility and process capabilities.