RTSI™ BUS CABLE

This guide describes how to connect the RTSI bus cable to National Instruments data acquisition (DAQ) boards, image acquisition boards, or motion controllers.

Introduction

Use the RTSI bus cables to implement the RTSI bus feature on National Instruments PCI and AT Series boards equipped with a RTSI bus connector.

The RTSI bus cables are short, 34-conductor ribbon cables equipped with two to five connectors to link together a group of boards. The cable options include connections for two, three, four, and five boards, plus an extended cable length to connect up to five long and short boards.

Installation

To install your RTSI bus cable, use the following procedure:

1. Turn off the power to your computer and open or remove the cover to expose your National Instruments boards.

✎ **Note** The power to your computer must remain off while the cover is open.

2. Your boards should be installed in adjacent expansion slots. If the boards are not grouped by connector position so that the long boards are adjacent to each other and the short boards are adjacent, regroup the boards following the installation instructions in the user manual of each board.

3. Connect your RTSI bus cable to your boards via the 34-pin connectors as follows:

   • Use the two, three, four, or five board RTSI bus cable to connect boards with adjacent connector positions. Plug the first cable connector into the farthest board connector. Then plug the

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adjacent cable connector into the next board connector. Repeat until you connect all boards.

- Use the extended five-board RTSI bus cable to connect up to five long and short boards. It is important to keep the boards with similar connector positions grouped together because the extended cable is equipped with only one long cable section. Connect the adjacent short and long board with the connectors of this long center-cable section. Then plug the remaining RTSI bus cable connectors into the adjacent board connectors. Figure 1 shows an example of an extended five-board cable setup.
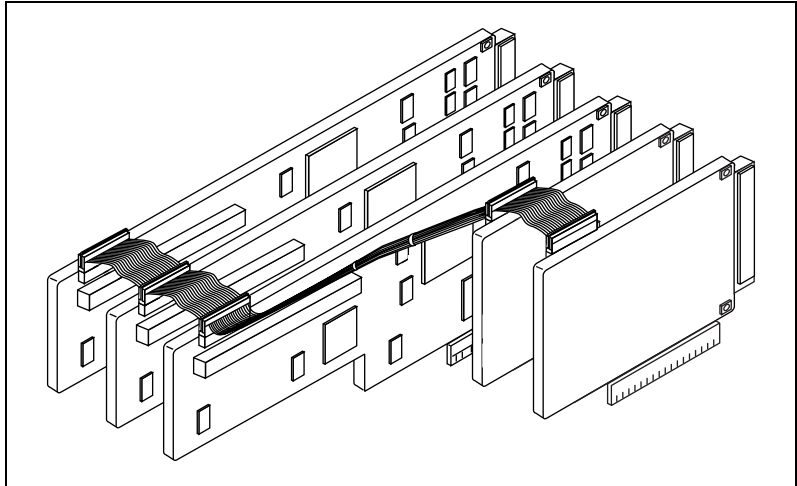
Figure 1. Extended Five-Board RTSI Bus Cable Setup

4. If applicable, continue with the installation instructions in the user manuals for each board.

5. When you have securely connected the RTSI bus cable to the board connectors, replace the computer cover and turn your computer on.

Your RTSI bus cable is installed.