Step Five: Install peripheral cabling

You can connect printers, terminals, modems (or any other standard EIA-232 device to be controlled by applications on the computer) to the concentrators by installing a cable between the peripheral and the module.

On the peripheral end of the cable, the cable connector depends on the requirements of the peripheral. The concentrator end of the cable must fit either an RJ-45 or DB-25 connector, depending on the concentrator model that you have.

The pin assignments for each type of connector are as follows:

DB-25 Pin assignments

Signal	Description	Pin
GND	Chassis Ground	1*
TxD	Transmitted Data	2
RxD	Received Data	3
RTS	Request To Send	4
CTS	Clear To Send	5
DSR	Data Set Ready	6
SG	Signal Ground	7
DCD	Data Carrier Detect	8
DTR	Data Terminal Ready	20
RI	Ring Indicator	22

Chassis Ground is also available on the connector shell

RJ-45 pin assignments are shown on the back.

RJ-45 Pin Assignments

Signal	Description	Pin
RI	Ring Indicator	1
DSR	Data Set Ready	2†
RTS	Request To Send	3
GND	Chassis Ground	4
TxD	Transmitted Data	5
RxD	Received Data	6
SG	Signal Ground	7
CTS	Clear To Send	8
DTR	Data Terminal Ready	9
DCD	Data Carrier Detect	10

† Pin 2 can be configured for DCD (through Digi Software) if you want to connect using an 8 pin connector

Refer to the CD-ROM for more detailed cabling information.

What Next?

At this point the hardware installation for your C/X system is complete. However, since the C/X adapter and concentrators must have software downloaded to their internal RAM before they become functional, you must next install the software drivers for your operating system.

• Read the instruction booklet for the CD-ROM that came with your C/X system for instructions on installing software.

• View the on-line documentation on the CD-ROM for more information about your C/X system.

AccelePort C/X System

C/X PCI Host Adapter
C/CON-8, C/CON-16 Concentrators

Hardware Installation Guide

Introduction

An AccelePort® C/X system consists of a C/X™ host adapter coupled with C/CON-8™ and/or C/CON-16™ concentrators (either rack-mount or desktop) from which EIA-232 peripheral devices such as printers, terminals or modems can be cabled and controlled. The adapter has two lines that can each support one or more concentrators; multiple concentrators can be linked in a chain to expand the number of EIA-232 ports available.
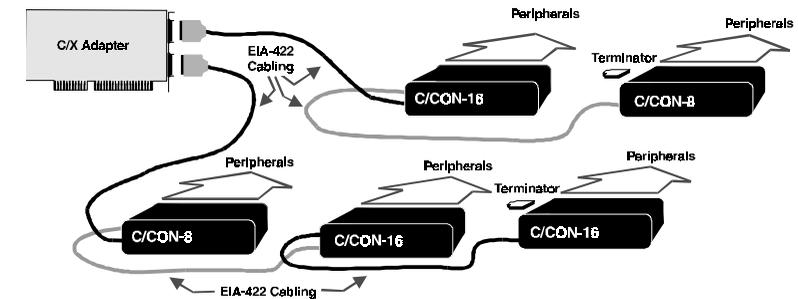
Figure 37. Example C/X setup (desktop concentrators)

This installation guide describes how to plan your setup and install the C/X host adapter and concentrator hardware.

Step One: Plan your setup

A C/X system can be set up in a variety of ways. Before you start your installation, be sure of the following:

Number and Type of components. You can connect up to eight concentrators on one C/X host adapter (including both lines). It is a good idea to balance the number of connections on each line. Having 6 concentrators on one line, and 2 on the other, for example, may not make the best use of line resource.

Concentrators are available in desktop or rackmount chassis.

Location of components. Using the cables that come with the product, concentrator modules can be located up to ten feet apart.

If your installation calls for greater distances between concentrators, you can use twisted pair cabling in a maximum cumulative length of up to 2000 feet (600 meters) from the host adapter.

> **Note:** The length of twisted pair cabling affects the maximum data transfer rate that can be expected over the cable. The longer the length, the lower the rate. To maintain a baud rate of 1.2 Mbaud, the maximum cumulative twisted pair cable length cannot exceed 1000 feet (300 meters).

You can also use fiber optic cable (a special fiber optic conversion option is available from Digi) that will allow a distance of up to 1.2 miles (2000 meters) from the adapter.

For even greater distances, you can attach a synchronous modem directly to the adapter, and remotely locate concentrators attached to a second synchronous modem.

Cabling. Before beginning the installation, be sure that you have the cables that you will need for the distances between concentrators, as well as cables for the peripherals that you will be attaching to the concentrators. C/CON concentrators are available with RJ-45 or DB-25 connectors for peripheral cabling. You will need to be sure that you have cables of the correct length and with the right connectors to properly attach the devices you want to use with each concentrator.

Power Requirements. Each concentrator requires its own power supply. Before proceeding with installation, you should verify that adequate power is available where each concentrator will be installed.

Additional information about the options available with the C/X system, such as specifications and cabling details, is provided on the CD-ROM that is packaged with the host adapter.

Step Two: Install the C/X PCI host adapter

Before installing the C/X host adapter, you should do the following:

- Wear an ESD wrist strap to ground yourself while handling the adapter. If one is not available, discharge static electricity from your body by touching an unpainted metal surface, such as the computer's chassis, prior to handling the adapter.

- Record the adapter serial number, which will enable Digi to provide you with better service, should the need arise.

  The serial number label has this general format: **S/N: (S) XXX XXXXX**

- Unplug power from the PC.

1. Remove the computer's cover.

2. Locate an available PCI slot in your computer and remove the slot plate.

3. Insert the adapter into the slot and screw the endplate to the computer chassis. The endplate must be screwed into the computer chassis to remain in compliance with Part 15 of FCC rules.

4. Replace the computer's cover.

5. Attach an EIA-422 cable to the connector of each line you will use on the adapter.

Step Three: Install concentrators

1. Position concentrators at the location you have prepared according to the plan you developed in **Step One**.

2. Attach the cable from Line l on the adapter to the connector labelled HOST ADAPTER on the first concentrator of the chain that is to be connected to Line 1.

   If you are cabling multiple concentrators together, attach another cable to the REMOTE connector of the first concentrator. Connect this cable to the HOST ADAPTER connector of the second concentrator. Continue cabling until all concentrators in the chain are connected.
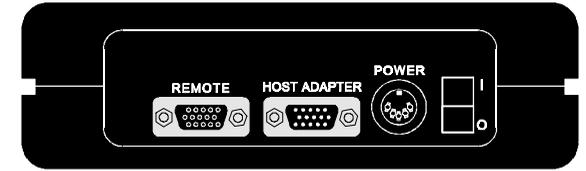

Figure 38. Side Panel of C/CON desktop module

3. Install a terminator plug in the REMOTE connector of the last concentrator in the chain.

4. Repeat steps 2 and 3 for Line 2 on the adapter (if you are using it).

5. Attach power supplies to the concentrator modules.

6. Turn on power to the unit(s).

Step Four: Set the node numbers

Each concentrator must have a unique node number so the adapter can recognize it on the chain. In general, you should set the node number of a concentrator according to its relative position in the chain. For example, the concentrator closest to the adapter would be node 1, the second would be node 2, and so on.

To set the node number, do the following:

1. Wait until you see **P1** displayed on the front panel of the unit (about 30 seconds after you power on the unit). This indicates that the Power-on Self Test has successfully completed.

2. Press the right arrow button once to display the current node number. (**1n** is the default.)

3. Press the left arrow button to increment the node number. Node numbers go up to **8n** and then return to **1n**.

4. To save the node number currently displayed on the front panel, press the right arrow button once. If the number was successfully saved to EEPROM, the display will read **Pn**.