Hardware Installation Guide

Digi International

SyncPort Adapter

90032600 B

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Preface

Purpose

This guide provides information regarding the components and installation of the Digi International SyncPort Adapter.

Audience

This manual is intended for end users who add components to computers.

Scope

This guide provides step-by-step instructions for installing the Digi SyncPort Adapter.

Reference Material

Reference material may be found in the list of Digi publications shown on page viii. Note that items may be added or deleted from this list at any time as Digi publications change.

You may also need the instruction manual that came with your computer since it is referenced in the Digi installation procedure for removing your computer's cover.

Publication Number	Title
92000507	WAN Links for Windows NT X.25 Installation and Configuration Guide
92000508	WAN Links for Windows NT Frame Relay Installation and Configuration Guide
92000242	WAN Links for MP-RAS Installation and Configuration Guide

Technical Support

Should you experience problems with Digi equipment, simply call Digi Technical Support. See page 37.

Glossary

ISA

An abbreviation for Industry Standard Architecture. This design allows various adapters to be added to the system by means of inserting plug-in cards into expansion slots. Commonly, ISA refers to the expansion slots themselves and can be 8-bit or 16-bit slots.

LAN

Local area network. A communications architecture that passes information between multiple systems over relatively short distances at high speeds.

Micro Channel

The design of the bus in IBM PS/2 computers which functions as either a 16-bit or a 32-bit bus. The Micro Channel can also be driven independently by multiple bus master processors.

PCI

An abbreviation for Peripheral Component Interconnect. It is defined as a local bus system for a computer built to the PCI specification. The SyncPort PCI adapter does bus mastering for transfer of data. The PCI local bus system allows up to three PCI-compliant expansion cards to be installed in a computer.

WAN

- Wide area network. A network composed of systems that are relatively far apart. A WAN may also encompass a series of LANs connected over a wide area.
- A network—public or private—that covers a wide geographical area.

Emissions and Immunity Standards

Electronic Emissions Notices

Federal Communications Commission (FCC) Statement

Radio Frequency Interference (RFI) (FCC 15.105)

This equipment has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Labeling Requirements (FCC 15.19)

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifications (FCC 15.21)

Changes or modifications to this equipment not expressly approved by Digi may void the user's authority to operate this equipment.

Cables **(FCC 15.27)**

Shielded cables must be used to remain within the Class B limitations.

The Digi SyncPort ISA, Micro Channel and PCI bus interfaces meet the following electromagnetic emissions standards:

- FCC Part 15, Subpart J, Class B
- ICES 003
- EN55022, Class B
- EN50082
- VCCI Class II

Industry Canada Compliance Statement

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulation (ICES-003 of Industry Canada, Class B).

Cet appareil numérique de la Classe B respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

Safety Standards

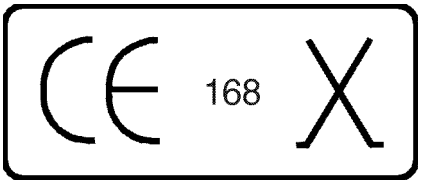
The Digi SyncPort ISA, Micro Channel, and PCI bus interfaces meet the following electromagnetic safety standards:

- UL 1950
- CSA C22.2 No. 950
- EN60950 Safety (TUV)

Telecom Standards

The Digi SyncPort ISA, Micro Channel, and PCI interfaces meet the following telecommunications standards:

- I-CTR2



Introduction

This guide provides installation instructions for Digi SyncPort Adapters. These adapters are intelligent communication units that can be installed in PC-compatible or other computer systems.

Features

SyncPort Adapters have the following features:

- Two high-speed synchronous communications ports with selectable interfaces capable of hardware speeds up to 2.048 Mbps per port
- Fast on-board RISC processor
- Surge protection
- All major electrical interfaces are available as cable options, including V.11/X.21 (EIA-422/485), V.24 (EIA-232 or V.28), V.35 and V.36
- Communication with Frame Relay or X.25 public data networks using external DSU/CSUs

In addition, the SyncPort Adapter has gained homologation acceptance for major European countries.

Bus Interfaces

The Digi SyncPort family of adapters consists of versions which can be inserted into each of the following bus types:

IBM-compatible ISA bus

This is used on IBM AT and compatible computers, as well as most 80286, 80386, 80486 and Pentium based computers. For brevity, the Digi SyncPort

Adapter designed for the ISA bus interface is termed the SyncPort ISA Adapter throughout the remainder of this manual.

Micro Channel architecture bus

This is used on most IBM PS/2 and compatible computers as well as on RS-6000 computers. For brevity, the Digi SyncPort Adapter designed for the Micro Channel bus interface is called the SyncPort Micro Channel Adapter in the remainder of this manual.

PCI bus

The PCI bus is an industry standard local bus system. Again, for the sake of simplicity, the Digi SyncPort Adapter designed for the PCI bus interface is called the SyncPort PCI Adapter throughout the remainder of this manual.

About Digi Manuals

This manual is divided in different chapters based on Industry Standard Architecture (ISA), Micro Channel, or Peripheral Component Interconnect (PCI) bus systems.

In addition to installing the hardware, you will also need to install software for your operating system so programs can communicate with the hardware. Device driver installation instructions can be found in separate manuals and are included with the software diskettes. See “Reference Material” on page vii for more information.

Components

The carton in which your SyncPort Adapter was shipped should contain the following items:

- The SyncPort Adapter, which consists of one of three types: ISA, Micro Channel, or PCI
- Modem cables

- *Hardware Installation Guide* (this book)
- Diskette containing Adapter Description Files (ADFs) for Micro Channel versions only
- Diagnostic diskette
- Loopback plug

Note: Driver software and the corresponding software manual are shipped separately.

SyncPort ISA Adapter

This chapter provides instructions for installing Digi SyncPort ISA Adapters.

Quick Overview

Prepare the SyncPort ISA Adapter for installation by selecting the I/O address and WAN electrical interfaces as follows:

- *Set the I/O address.* The default I/O address is 328h. Change this only if it conflicts with another adapter installed in your personal computer. Refer to page 6 for more information.
- *Set the WAN electrical interfaces.* The WAN interface connectors may be configured for selected electrical interfaces. Refer to page 8.
- *Install the adapter in an available slot in your computer.* Refer to "Install the SyncPort ISA Adapter" on page 11.
- *Optional—Run the Memory Map Utility and the User Diagnostics program*. `DIGIMMAP.EXE` and `UD-RISC.EXE` are available on the diskette that came with your adapter. Refer to page 12.

Before Beginning the Installation

Before installing your SyncPort ISA Adapter, write down the serial number of the adapter in the space provided below. You will need it if you have to contact Digi International regarding this adapter. The serial number is on the component side of the adapter, near the top of the adapter (see Figure 1 on page 6).

Serial Number: _ _ _ _ _ _ _ _ _ _ _ _ _

Set the I/O Address

Prior to installing the SyncPort ISA Adapter, set the I/O address using the bank of four DIP switches identified as Switch 1 (called out as SW1 on the adapter) in Figure 1. These switches are visible through the mounting bracket. Note that the serial number is on the component side of the board, near the top.

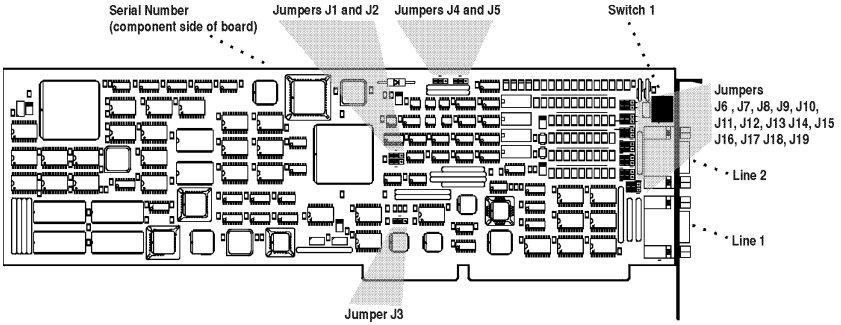


Figure 1 SyncPort ISA Adapter

Important: Do not change the setting of Jumper J3. It is set in the factory and must not be changed.

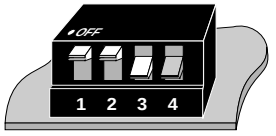
Figure 2 on page 7 illustrates the DIP switch settings. The SyncPort ISA Adapter uses four contiguous bytes of I/O address space, starting with the address set by the SW1 DIP switches. To ensure flexibility, seven I/O address ranges are available: 108h, 118h, 128h, 208h, 228h, 308h and 328h. The default is 328h; change it only if it conflicts with another adapter installed on your computer. However, if it needs to be changed, you may choose any I/O Address not already in use on your computer.

Step 1. Write the address in the space provided below. You will need it later when configuring the software.

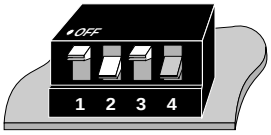
I/O address: _ _ _ _ _ _ _ _ _ _ _ _ _

Note: The fourth switch should always be in the down position.

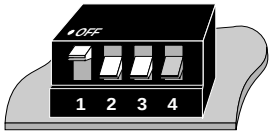
Step 2. Choose one of the starting addresses and set the switches as shown in Figure 2.



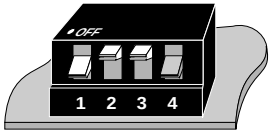
108h



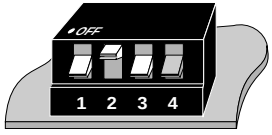
118h



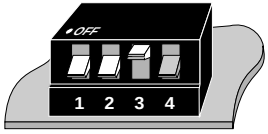
128h



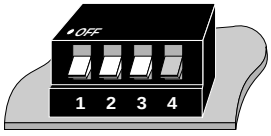
208h



228h



308h



328h (default)

Figure 2 Switch Address

Set the WAN Electrical Interface

The WAN interface connectors must be configured to match the equipment to which the SyncPort ISA Adapter will be connected. The WAN connectors (line 1 or line 2) can be individually set for any of these electrical interfaces:

- V.11 (EIA-422/485)
- V.24 (EIA-232/V.28)
- V.35
- V.36

Note that V.11 is equivalent to V.11/X.21 or EIA-422 and X.21; V.24 is equivalent to EIA-232 and V.28.

Jumpers are used to set the electrical interface for each line. This allows the user to run one configuration on one line while using a different configuration on the other line.

Important: Jumper J3 on the SyncPort ISA Adapter is set in the factory, and must not be changed. The correct setting is pins 1 and 2 (the left and middle pins) jumpered together.

Tables 1 and 2 provide information regarding jumper settings for Lines 1 and 2.

Table 1 ISA Adapter Line 1 Jumper Settings

Jumper	V.11 pins	V.24 pins	V.35 pins	V.36 pins
J4	1-2	2-3	2-3	1-2
J5	1-2	2-3	1-2	1-2
J7	1-2	2-3	2-3	1-2
J9	1-2	2-3	1-2	1-2
J11	1-2	2-3	2-3	1-2
J13	1-2	2-3	2-3	1-2
J14	1-2	2-3	1-2	1-2
J16	1-2	2-3	1-2	1-2
J19	1-2	2-3	2-3	1-2

Table 2 ISA Adapter Line 2 Jumper Settings

Jumper	V.11 pins	V.24 pins	V.35 pins	V.36 pins
J1	1-2	2-3	1-2	1-2
J2	1-2	2-3	2-3	1-2
J6	1-2	2-3	2-3	1-2
J8	1-2	2-3	1-2	1-2
J10	1-2	2-3	2-3	1-2
J12	1-2	2-3	2-3	1-2
J15	1-2	2-3	1-2	1-2
J17	1-2	2-3	1-2	1-2
J18	1-2	2-3	2-3	1-2

Install the SyncPort ISA Adapter

To install your SyncPort Adapter, you will need to remove your computer's cover. If necessary, refer to your computer's installation manual for help.

Step 1. Turn off your computer's power.

Step 2. Remove the computer cover.

Step 3. Locate an available 16-bit ISA slot in your computer. It may be covered by a slot plate; if so, remove the slot plate.

Step 4. Insert the SyncPort ISA Adapter into the ISA slot and screw the endplate to the computer chassis.

Step 5. Replace your computer's cover.

Step 6. Turn on your computer's power.

The hardware installation of your SyncPort ISA Adapter is now complete.

Step 7. Refer to the applicable software manual for driver installation instructions. See "Reference Material" on page vii.

Run the Memory Map Utility and User Diagnostics

Memory Map Utility

The memory map utility, DIGIMMAP.EXE, is an MS-DOS based executable program that is designed to detail locations in memory that are available for the Digi product.

To run DIGIMMAP.EXE follow this procedure:

1. Boot your system normally. This should cause any adapters in your system to be initialized.

2. Place a bootable DOS formatted diskette in drive A (or your boot drive, if different from drive A.) This diskette must have no TSRs or memory mangers present, or DIGIMMAP may give erroneous results.

3. Perform a soft reboot by pressing the <Ctrl>, <Alt>, and <Del> keys simultaneously.

   Note: Do not press the reset button or power cycle your machine to reboot; resetting the machine may turn off any adapters that were activated in Step 1.

4. Now place the diskette containing the diagnostic software in the diskette drive and type the following:

   A:\RISC\DIGIMMAP (assuming that you put the diskette in drive A)

5. Read the first screen and then press the <E> key to execute the utility.

6. The center column will contain a list of 32K starting addresses which appear to be available. Write down several of these addresses to use—some devices can fool the memory mapper by turning their memory off making the area appear to be available. Try addresses in this order:

   Addresses beginning with “D” (D0000h and D8000h)
   Addresses beginning with “C” (C0000h and C8000h)
   Addresses beginning with “E” (E0000h and E8000h)

User Diagnostics

If you wish to verify its operation, you can run the *User Diagnostics* from the diskette that came with your adapter. Use the diagnostics in two ways

- Run basic tests to verify the integrity of the he internal components and signals on the adapter
- Use with a loopback plug to test the signals out to the end of the cable.

The diagnostic is a DOS-based program. To run the diagnostics program, do the following:

1. Attach the loopback plug to the end of the cable if you wish to run the loopback test.
2. Go to the `\RISC` subdirectory of the diskette drive in which the program diskette is loaded. Example `A:\RISC`
3. Type `UD-RISC` on the command line. The main menu of the diagnostics will display. You will need to enter two parameters:

   - The board I/O address
   - The base address

   Also, if you wish to use the loopback test capability, you must change the `Loopback:` option from `No` to `Yes`.
4. Press the `<E>` key to start the tests. The tests will be run consecutively. Pass/fail status is indicated on the right hand of the screen.
5. If all tests pass, the board is functioning correctly and you are ready to install the device driver software. Make a note of the I/O address and the base address before exiting the program (you will need to specify these when you install the device driver software).
6. If failures occur, the most likely cause is a memory conflict. Try a different base address and execute the diagnostics again. If you get a Hardware Reset Error, try a different I/O address (be sure to set the DIP switches for the new address).

If you have questions about the operation of the diagnostics, refer to the help screens, or access the *readme* file located in the same directory as the diagnostic.

SyncPort Micro Channel Adapter

This chapter provides instructions for installing Digi SyncPort Micro Channel Adapters.

Quick Overview

Prepare for the installation of the SyncPort Micro Channel Adapter as follows:

- *Set the WAN electrical interfaces.* The WAN interface connectors may be configured for selected electrical interfaces. Refer to the instructions on page 16.
- *Install the SyncPort Micro Channel Adapter in an available slot in your computer.* Refer to the instructions on page 19.
- *If your computer is a PS/2*, read "PS/2 Compatible Configuration Steps" on page 20.
- *Optional—Run the Memory Map Utility and the User Diagnostics program*. `DIGIMMAP.EXE` and `UD-RISC.EXE` are available on the diskette that came with your adapter. Refer to page 22.

Before Beginning the Installation

Before installing your Digi SyncPort Micro Channel Adapter, write the serial number of the adapter in the space provided below. You will need it if you have to contact Digi International regarding the adapter. The serial number is on the back side (solder side) of the adapter, near the top of the adapter. Refer to Figure 3 on page 16.

Serial Number: _ _ _ _ _ _ _ _ _ _ _ _ _

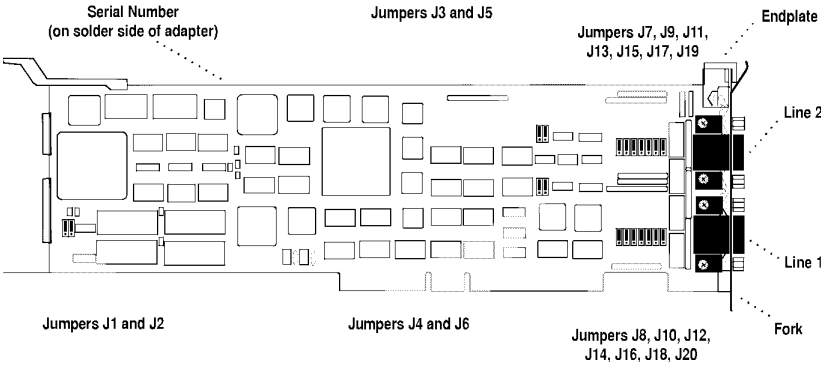


Figure 3 Jumper Locations for Micro Channel Bus Adapter

Set the WAN Electrical Interface

The WAN interface connectors must be configured to match the equipment to which the SyncPort Micro Channel Adapter will be connected. The WAN connectors (line 1 or line 2) can be individually set for any of these electrical interfaces:

- V.11/X.21 (EIA-422/485)
- V.24 (EIA-232/V.28)
- V.35
- V.36

Note that V.11 is equivalent to EIA-422/485 and X.21; V.24 is equivalent to EIA-232 or V.28.

Jumpers are used to set the electrical interface for each line. This allows the user

to run one configuration on one line while using a different configuration on the other line.

Important: Jumpers J1 and J2 are set in the factory and must not be changed. Verify that the jumpers are set to positions 1-2 for both line 1 and line 2.

Table 3 Micro Channel Adapter Line 1 Jumper Settings

Jumper	V.11 Pins	V.24 Pins	V.35 Pins	V.36 Pins
J4	1-2	2-3	1-2	1-2
J6	1-2	2-3	2-3	1-2
J8	1-2	2-3	2-3	1-2
J10	1-2	2-3	2-3	1-2
J12	1-2	2-3	1-2	1-2
J14	1-2	2-3	1-2	1-2
J16	1-2	2-3	1-2	1-2
J18	1-2	2-3	2-3	1-2
J20	1-2	2-3	2-3	1-2

Table 4 Micro Channel Adapter Line 2 Jumper Settings

Jumper	V.11 Pins	V.24 Pins	V.35 Pins	V.36 Pins
J3	1-2	2-3	1-2	1-2
J5	1-2	2-3	2-3	1-2
J7	1-2	2-3	2-3	1-2
J9	1-2	2-3	2-3	1-2
J11	1-2	2-3	1-2	1-2
J13	1-2	2-3	1-2	1-2
J15	1-2	2-3	1-2	1-2
J17	1-2	2-3	2-3	1-2
J19	1-2	2-3	2-3	1-2

Install the Micro Channel Adapter

To install your Micro Channel Adapter, you will need to remove your computer's cover. If necessary, refer to your computer's installation manual for help.

Step 1. Turn off your computer's power.

Step 2. Remove your computer's cover.

Step 3. Locate an available Micro Channel slot in your computer and loosen the thumbscrew that holds the slot plate in place. Remove the slot plate.

Step 4. Insert the Micro Channel Adapter into the slot, making sure that the "fork" is in position under the endplate thumbscrew. Tighten the thumbscrew.

Note: The SyncPort Micro Channel Adapter can be installed in either a 16 or 32-bit slot. If you plug the adapter into a 16-bit slot, be sure that the exposed 32-bit extension does not come into contact with any components on the motherboard.

Step 5. Replace the cover on your computer.

Step 6. Turn on your computer's power.

Your SyncPort Micro Channel Adapter is now installed.

PS/2 Compatible Configuration Steps

This procedure is necessary for PS/2 compatible machines using the Micro Channel bus only. If you are installing the adapter in an RS-6000 system, skip this procedure.

Step 1. Insert your working copy (do not use the original copy) of the IBM Reference Diskette into your boot drive and turn on the computer. Expect an error message—the adapter will not be found in the configuration file at this point.

Step 2. Select `Copy an Option Diskette` from the main menu. Follow the instructions given on your computer screen for copying ADF files onto your reference diskette.

Step 3. Select `Set Configuration` from the main menu. Then select `Run Automatic Configuration.` Auto-Config will find non-conflicting address and interrupt parameters for the adapter. If you choose to set the parameters manually, you will be given the following choices:

Memory Start Address

Below 1 megabyte:

0D8000h, 0D0000h, 0C8000h, 0C0000h

Sixteenth megabyte:

FC0000h, FA0000h, F80000h

Fourth gigabyte (32-bit slot only):

F0000000h, F2000000h, F4000000h, F6000000h, F8000000h and FA000000h

The memory start addresses F000000h-FA000000h (fourth gigabyte) are available only if the adapter is in a 32 bit slot. If the adapter is in a 16 bit slot, only addresses 0C0000h-FC0000h are available.

I/O address

108h, 118h, 128h, 208h, 228h, 308h or 328h.

Interrupt Select

IRQ 3, 5, 7, 10, 11, 12, 15 or None (disabled).

Step 4. Refer to the applicable software manual for driver installation instructions. See “Reference Material” on page vii.

Run the Memory Map Utility and User Diagnostics

Memory Map Utility

The memory map utility, `DIGIMMAP.EXE`, is an MS-DOS based executable program that is designed to detail locations in memory that are available for the Digi product.

To run `DIGIMMAP.EXE` follow this procedure:

1. Boot your system normally. This should cause any adapters in your system to be initialized.

2. Place a bootable DOS formatted diskette in drive A (or your boot drive, if different from drive A.) This diskette must have no TSRs or memory mangers present, or DIGIMMAP may give erroneous results.

3. Perform a soft reboot by pressing the `<Ctrl>`, `<Alt>`, and `<Del>` keys simultaneously.

   Note: Do not press the reset button or power cycle your machine to reboot; resetting the machine may turn off any adapters that were activated in Step 1.

4. Now place the diskette containing the diagnostic software in the diskette drive and type the following:

   `A:\RISC\DIGIMMAP` (assuming that you put the diskette in drive A)

5. Read the first screen and then press the `<E>` key to execute the utility.

6. The center column will contain a list of 32K starting addresses which appear to be available. Write down several of these addresses to use—some devices can fool the memory mapper by turning their memory off making the area appear to be available. Try addresses in this order:

   Addresses beginning with “D” (D0000h and D8000h)
   Addresses beginning with “C” (C0000h and C8000h)
   Addresses beginning with “E” (E0000h and E8000h)

User Diagnostics

If you wish to verify its operation, you can run the *User Diagnostics* from the diskette that came with your adapter. Use the diagnostics in two ways

- Run basic tests to verify the integrity of the he internal components and signals on the adapter
- Use with a loopback plug to test the signals out to the end of the cable.

The diagnostic is a DOS-based program.

To run the diagnostics program, do the following:

1. Attach the loopback plug to the end of the cable if you wish to run the loopback test.

2. Go to the `\RISC` subdirectory of the diskette drive in which the program diskette is loaded. Example `A:\RISC`

3. Type UD-RISC on the command line. The main menu of the diagnostics will display. You will need to enter two parameters:

   - The board I/O address
   - The base address

   Also, if you wish to use the loopback test capability, you must change the `Loopback:` option from `No` to `Yes`.

4. Press the `<E>` key to start the tests. The tests will be run consecutively. Pass/fail status is indicated on the right hand of the screen.

5. If all tests pass, the board is functioning correctly and you are ready to install the device driver software. Make a note of the I/O address and the base address before exiting the program (you will need to specify these when you install the device driver software).

6. If failures occur, the most likely cause is a memory conflict. Try a different base address and execute the diagnostics again. If you get a Hardware Reset Error, try a different I/O address.

If you have questions about the operation of the diagnostics, refer to the help screens, or access the *readme* file located in the same directory as the diagnostic.

SyncPort PCI Adapter

This chapter provides installation instructions for Digi SyncPort PCI Adapters.

Quick Overview

Prepare for the installation of the SyncPort PCI Adapter as follows:

- *Install the SyncPort PCI Adapter in an available slot in your computer.* Refer to the instructions on page 26.
- *Optional—Run the User Diagnostics program.* `UD-PCI.EXE` is available on the diskette that came with your adapter. Refer to page 28.

Before Beginning the Installation

Before installing your Digi SyncPort PCI Adapter, write down the serial number of the adapter in the space provided below. You will need it if you have to contact Digi International regarding the adapter. The serial number is on the component side of the adapter, near the top of the adapter.

Serial Number: _ _ _ _ _ _ _ _ _ _ _ _ _

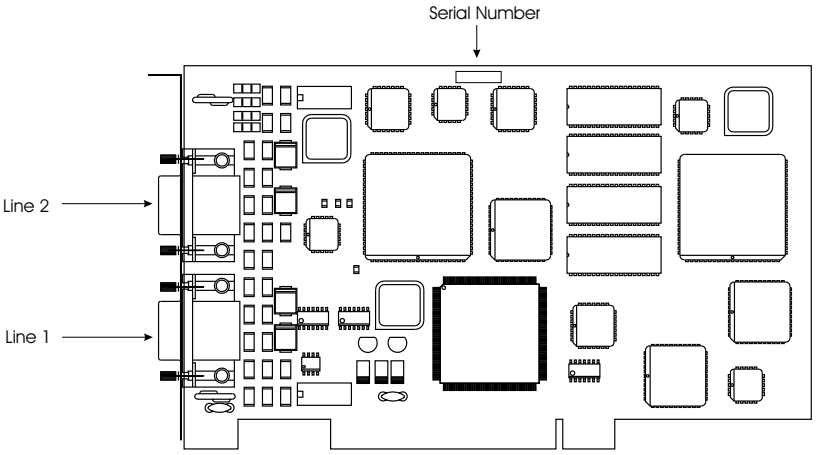


Figure 4 PCI Adapter

Install the PCI Adapter

To install your PCI Adapter, you will need to remove your computer's cover. If necessary, refer to your computer's installation manual for help.

Step 1. Turn off your computer's power.

Step 2. Remove your computer's cover.

Step 3. Locate an available PCI slot in your computer and remove the slot plate.

Step 4. Insert the adapter into the PCI slot and screw the endplate to the computer chassis.

Step 5. Replace your computer's cover.

Step 6. Turn on your computer's power.

The hardware installation of your SyncPort PCI Adapter is now installed.

Step 7. Refer to the applicable software manual for driver installation instructions. See "Reference Material" on page vii.

User Diagnostics

If you wish to verify its operation, you can run the *User Diagnostics* from the diskette that came with your adapter. Use the diagnostics in two ways

- Run basic tests to verify the integrity of the he internal components and signals on the adapter
- Use with a loopback plug to test the signals out to the end of the cable.

The diagnostic is a DOS-based program.

To run the diagnostics program, do the following:

1. Attach the loopback plug to the end of the cable if you wish to run the loopback test.

2. Go to the `\PCI` subdirectory of the diskette drive in which the program diskette is loaded. Example `A:\PCI`

3. Type `UD-PCI` on the command line.

   The main menu of the diagnostics will display. The program will display the adapter base address that was assigned by the host.

   If you wish to use the loopback test capability, you must change the `Loopback:` option from `No` to `Yes`.

4. Press the <E> key to start the tests. The tests will be run consecutively. Pass/fail status is indicated on the right hand of the screen.

5. If all tests pass, the board is functioning correctly and you are ready to install the device driver software. Make a note of the I/O address and the base address before exiting the program (you will need to specify these when you install the device driver software).

6. If failures occur, the most likely cause is a memory conflict. Try a different base address and execute the diagnostics again. If you get a Hardware Reset Error, try a different I/O address.

If you have questions about the operation of the diagnostics, refer to the help screens, or access the *readme* file located in the same directory as the diagnostic.

Specifications

ISA Adapter

Power Requirements

+5 Volts ± 5%, 2.5 amps typical

+12 Volts ± 5%, 100 milliampere typical

-12 Volts ± 5%, 40 milliampere typical

Environmental Requirements

Temperature:	0^{o} C to 55^{o} C (32^{o} F to 131^{o} F)
Relative Humidity:	5% to 95% non-condensing
Air Movement:	30 CFM Forced
Altitude:	0 to 3658 meters (0 to 12,000 feet)

Mechanical Information

Length:	332.74 mm (13.1 inches)
Width:	15.24 mm (.6 inches)
Height:	114.3 mm (4.5 inches)
Weight:	340.19 grams (12 ounces)

Micro Channel Adapter

Power Requirements

+5 Volts ± 5%, 1.3 amps typical

+12 Volts ± 5%, 40 milliampere typical

-12 Volts ± 5%, 40 milliampere typical

Environmental

Temperature:	0^{o} C to 55^{o} C (32^{o} F to 131^{o} F)
Relative Humidity:	5% to 95% non-condensing
Air Movement:	30 CFM Forced
Altitude:	0 to 3658 meters (0 to 12,000 feet)

Mechanical

Length:	292.1 mm (11.5 inches)
Width:	15.24 mm (.6 inches)
Height:	88.26 mm (3.475 inches)
Weight:	231.05 grams (8.15 ounces)

PCI Adapter

Power Requirements

+5 Volts ± 5%, 1.5 Amps typical

+12 Volts ± 5%, 40 milliampere typical

-12 Volts ± 5%, 40 milliampere typical

Environmental

Temperature:	0^{o} C to 55^{o} C (32^{o} F to 131^{o} F)
Relative Humidity:	5% to 95% non-condensing
Air Movement:	30 CFM Forced
Altitude:	0 to 3658 meters (0 to 12,000 feet)

Mechanical

Length:	6.875 inches (1/2 length card)
Width:	.55 inches
Height:	4.2 inches
Weight:	12 ounces

Cable Diagrams

This chapter provides illustrations of SyncPort Adapter modem cables and loopback plugs.

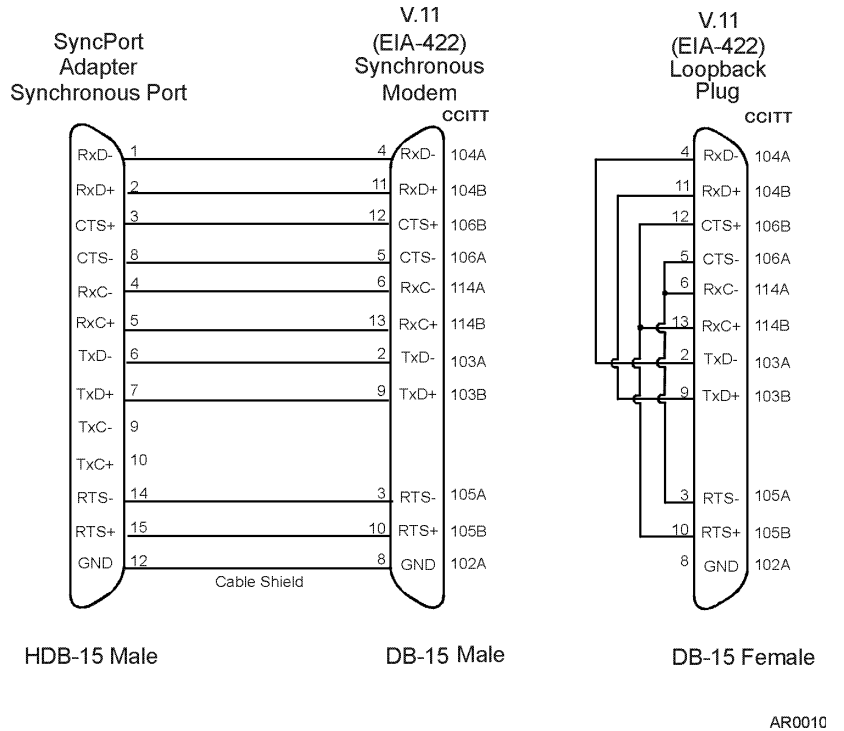


Figure 5 Pinout for V.11 (EIA-422/EIA-485) Modem Cable and Loopback Plug

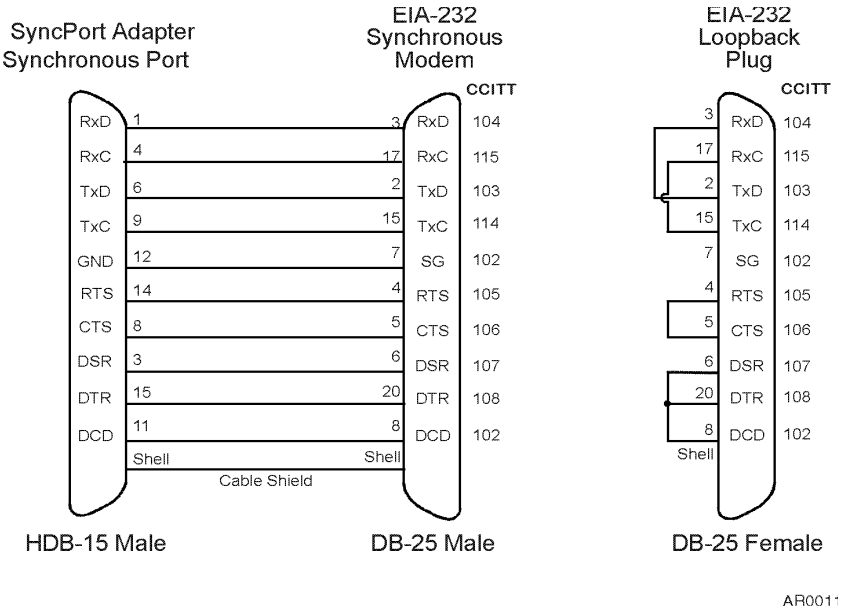


Figure 6 Pinout for V.24 (EIA-232/V.28) Modem Cable and Loopback Plug

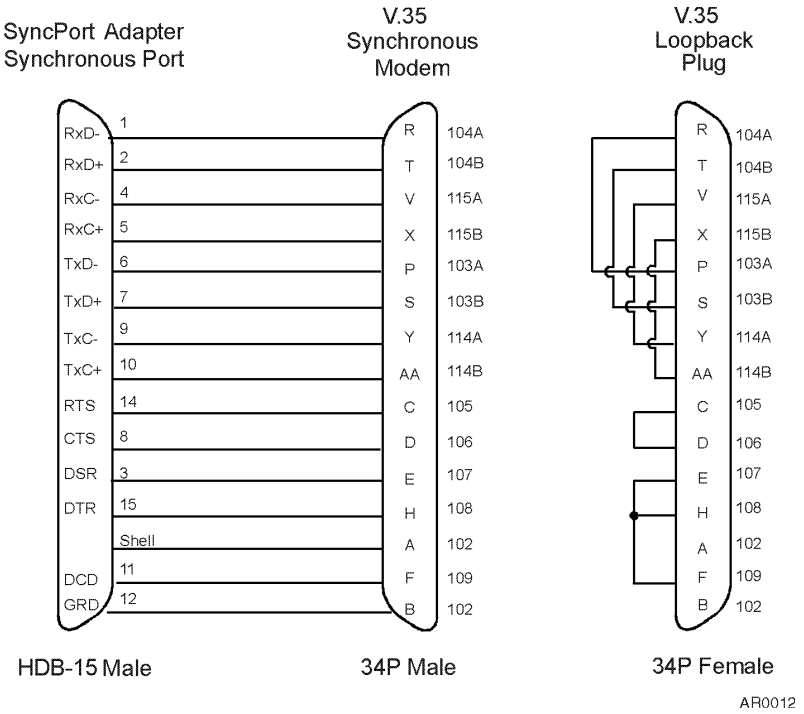


Figure 7 Pinout for V.35 Modem Cable and Loopback Plug

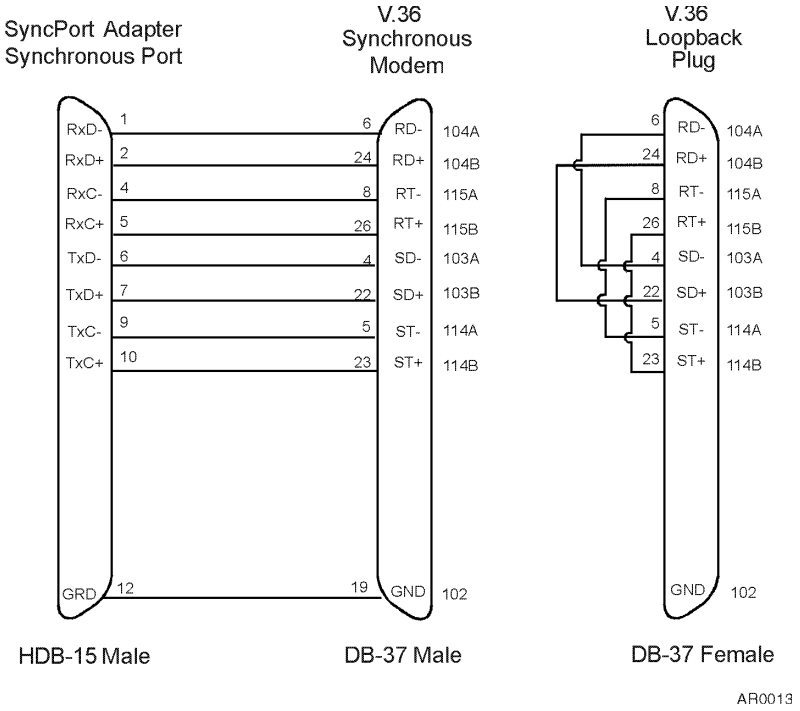


Figure 8 Pinout for V.36 Modem Cable and Loopback Plug

Digi Support Services

In This Chapter

This chapter describes Digi support services. It covers the following topics:

Web Server: Access to Digi Information

Purpose

The Digi Web server provides you with access to product information, drivers, manuals, new product announcements, programs, related installation information and application stories.

Address

You can access the Web server at http://www.dgii.com.

Internet FTP Server: Access to Digi Drivers

Purpose

The Digi anonymous FTP server provides you with access to Digi drivers and related installation information.

Address

You can access the FTP server at ftp.dgii.com.

Tips on Using the FTP Server

When you access the Digi FTP server, do the following:

- Log in as anonymous
- Enter your E-mail address when asked for a password.
- Locate drivers and related installation tips in the appropriate operating system/board type directory.
- Enter “bin” before downloading any driver files to ensure proper binary transfer.
- Enter “ASCII” before downloading ASCII text files.
- See the text file, *download.doc* for information on uncompressing files after downloading.

Digi BBS: Access to Drivers, Information

Purpose

The Digi electronic bulletin board service (BBS) provides the following:

- Access to general and technical information about Digi's products
- Access to the most recent software driver updates and upgrades
- An opportunity to leave messages for Technical Support regarding Digi products.

Modem Support

The Digi BBS supports the following:

- Line speeds of 1200, 2400, 9600, 14,400, and 28,800 bps
- V.32, HST 14.4, V.42 and V.42bis standards, with full MNP class 15 error correction and data compression.
- Modem settings of eight bits, no parity and one stop bit (8 N 1), though other settings may also work.
- Zmodem, Xmodem, Ymodem, Kermit and other download protocols.

Telephone Numbers

Here are the telephone numbers for access to the BBS:

- In North America: (612) 912-4800
- In Europe: +49 221 9205211
- In Asia: +65 735 2460

FaxBack Server: Information by FAX

Purpose

The FaxBack server provides you with manuals and technical information by FAX.

How to Use the FaxBack Server

Call (612) 912-4990 on a touch-tone telephone and listen for instructions.

Customer Service

Purpose

Digi's staff of customer service representatives can help you with the following:

- Software and documentation update requests
- Returned Merchandise Authorizations (RMAs)—if you need to return your Digi product for repair.

How to Reach Customer Service

To reach Customer Service, do any of the following:

- Telephone (612) 912-3456
- Fax (612) 912-4959
- Send E-mail to cust_serv@dgii.com (Please include your telephone and FAX numbers.)

Return Procedures

Warranty Information

Digi products have a five-year parts and labor warranty, and Digi assumes responsibility for any defective parts, according to the limits specified in the warranty. However, many problems are due to factors other than product defects. To save you time and possibly additional cost, Digi asks that you first try to resolve difficulties by contacting our technical support representatives at (612) 912-3456.

Return Procedure

To return your Digi product for repair do the following:

- Obtain an RMA (Returned Merchandise Authorization) number from a Digi customer service representative.
- Place the RMA number on the shipping carton, on or near the address label.
- Ship authorized returns to Digi International, 10000 West 76th Street, Eden Prairie, MN 55344.

Technical Support

Introduction

If you experience difficulty with a product, Digi has a staff of technical support specialists to assist you.

Support Process

Follow this process to resolve the problem with Digi products:

- First, contact your Digi dealer or distributor. They provide first-level technical support and have the training to help you with any installation questions or difficulties you may have.
- If you still experience difficulties (after contacting first-level support), contact Digi Support Services.

Tips for When You Call Technical Support

Here are some tips to ensure that your call to Technical Support is productive:

- Prior to calling, please fill out the form "Information About Your System" that follows. The information you supply here provides your technical support representative with a clear picture of your system and any potential conflicts between devices.
- Please call from a position where you can operate your system.

How to Contact Digi Technical Support

To reach Digi Technical Support:

- In USA: Telephone (612) 912-3456; FAX (615) 834-5399; E-mail support@dgii.com
- In Europe: Telephone +49 221 920520; FAX +49 221 9205210; E-mail support@dgii.com
- In Asia: Telephone +65 732 1318; FAX +65 732 1312; E-mail support@dgii.com

Information About Your System

Serial number of your Digi product:_____

Computer make:_____

Computer model:_____

Computer clock speed:_____

Hard disk controller:

Type:_____

Memory addressed at:_____

I/O port used:_____

IRQ:_____

LAN card:

Type:_____

Memory addressed at:_____

I/O port used:_____

IRQ:_____

Other

Type:_____

Memory addressed at:_____

I/O port used:_____

IRQ:_____

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