



Software Manual

Digi AccelePort Family
Device Driver for Microsoft Windows NT
92000274 Rev A

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Introduction

This manual provides the information you need to install, configure and operate Digi AccelePort[®] asynchronous serial communications adapters in Microsoft[®] Windows[®] NT environments. The accompanying diskette contains all of the files required to install and configure the device driver software.

The Digi device driver for Windows NT provides full communications support for all applications which use the Windows[®] COMM API. This device driver does not support virtual UARTs or Interrupt 14h BIOS commands.

Note:

Be sure to read the text file **README.TXT**, included on the device driver diskette. This file contains information that was not available at the time of this manual's publication.

Supported Products

The Windows 95 device driver package supports the following AccelePort adapters on Intel x86 and DEC Alpha platforms:

- Xr[™] ISA, Xr[™] PCI, Xr 920[™] ISA and Xr 920[™] PCI four and eight port adapters
- Xe[™] two, four and eight port adapters
- Xem[™] ISA and Xem[™] PCI host adapters
- C/X[™] ISA and C/X[™] PCI host adapters
- EPC/X[™] ISA and EPC/X[™] PCI host adapters

Hardware and Software Requirements

- One or more Digi intelligent serial communications adapters (AccelePort Xr/Xr 920, AccelePort Xe, AccelePort C/X, AccelePort EPC/X or AccelePort Xem).
- Microsoft Windows NT.
- One or more application programs, such as the Windows NT Terminal program (for NT 3.51), HyperTerminal (for NT 4.0), PROCOMM PLUS for Windows or Remote Access Service (RAS), which support Windows COMM API calls. Note that some application programs support only ports COM1-COM9. Others can handle more ports, but require a prefix of “\\.\” before the name (for example, \\.\COM10). Check the documentation for your communications application to find out how it handles ports above COM9.

Installation

Hardware Installation

Before proceeding with the software installation for the Microsoft Windows device driver, you must first install the adapter(s) according to the instructions in the *Installation Guide* for your adapter.

Important!

When installing multiple PCI adapters, it is necessary to install and configure them one at a time to insure that the correct parameters are applied to each adapter.

If you move a PCI adapter from one slot to another, you will need to remove the adapter installation and reinstall the driver with the adapter in the new slot.

Important!

Before installing the Windows Device driver, be sure to run the User Diagnostics to verify that the adapter is working correctly. See the Installation Guide for your adapter for details.

Software Installation

Important!

Microsoft Windows NT Networking must be installed on your system before the AccelePort device driver can be installed.

- If you have previously installed an Ethernet or other network interface adapter, Windows NT Networking was installed at that time, and no further action is necessary.
- If you are installing both an AccelePort adapter and a network interface adapter at this time, install the network interface adapter *first*, then install the AccelePort device driver.
- If you are installing only an AccelePort adapter, and no other network interface adapter is present, you need to install the MS Loopback Adapter, a software network interface emulator which enables the computer to connect to network resources which are actually local. See Appendix A for details.

1. Start Windows NT.
2. From the Windows NT Control Panel, select the **Network** icon.
3. If you have not previously installed an Ethernet or other network interface card, you will get a message stating that Microsoft Networking is not installed. If this occurs, you need to either install a network interface card or MS Loopback Adapter. See Appendix A of this manual for the procedure for installing MS Loopback Adapter.

4. NT 4.0:

Select the **Adapter** tab. Then click on **Add**. The **Select Network Adapter** dialog will be displayed. Click on **Have Disk**. You will now be asked to enter the path of the driver files. For example: **a:\i386** if you are installing from a floppy to an Intel system, or **a:\alpha** if you are installing from a floppy to an Alpha system.

NT 3.51:

Click on **Add Adapter**. This starts the Adapter Configuration Wizard. From the displayed list, select the entry “<Other> **Requires disk from manufacturer**” and click on **Continue**. You will now be asked to enter the path of the driver files. For example: **a:\i386** if you are installing from a floppy to an Intel system, or **a:\alpha** if you are installing from a floppy to an Alpha system.

4. From the displayed pick list, select the adapter you wish to configure.
5. If the adapter is an ISA adapter, you will now be asked for the I/O base port address and the Memory base address. You will also see a pictorial representation of the DIP switches on the end of the adapter; the graphic shows the correct switch setting for the selected I/O base port address (the memory base address for AccelePort adapters is set by the device driver).
6. For C/X™, EPC/X™ and Xem™ systems, you will now be presented with dialogs for adding concentrators and PORTS™ and/or Modem/em™ modules to the configuration. These dialogs are fully documented in context-sensitive help screens.
7. Once the adapter, concentrators and modules have been configured, you will see a “tree” of the system. The tree shows the adapter, concentrators, modules and ports, each of which can be configured via the “Properties” button. Detailed documentation for all configuration functions is provided through the Help system.
8. Once all parameters have been set as desired, click on “OK” to exit the configuration applet.
9. If you are installing multiple PCI adapters, install the next adapter and repeat the above steps.

Uninstalling the Device Driver

To remove the Digi device driver, go to the Windows NT Control Panel, select **Network**, highlight the AccelePort adapter and click on **Remove**. Restart Windows NT to complete the removal process.

Testing the Ports

To test the Digi ports under Windows NT 3.51, you may use the Windows NT Terminal application or Digi's TTY.EXE.

To test the Digi ports under Windows NT 4.0, use the Windows NT HyperTerminal application or Digi's TTY.EXE.

Windows NT Terminal will allow you to test COM1-COM9.

TTY.EXE is a Digi application similar to Terminal, and allows you to test COM1-COM256. TTY.EXE may be obtained from Digi's World Wide Web and FTP servers (see the customer information packet included with your adapter for WWW and FTP information).

Note:

Windows NT will only recognize port names above COM9 if they are prefixed with "\\.\\". For example, to access COM10, use \\.\COM10. For the sake of consistency, this convention may also be used for COM1-COM9, if desired. Some communications applications handle this automatically; consult your application's documentation to see how it handles port names.

Note:

The Windows NT device driver supports ALTPIN software re-wiring of the DCD and DSR signals to facilitate the use of 8-pin RJ-45 connectors with adapters which support RJ-45 connections.

Please note, however, that Microsoft RAS does not support ALTPIN. Therefore, if your adapter is equipped with RJ-45 connectors, and you intend to attach modems, you must use full 10-pin RJ-45 connectors.

See the *Installation Guide* for your adapter or concentrator for more information about ALTPIN wiring.

Troubleshooting

Problem

The following error message appears in the Event Viewer:

Wait confirmation failed.... (the exact wording of the error message varies with adapter type)

Causes/Solutions

- You have chosen the incorrect adapter type for the Digi product you have installed. Reinstall the driver (uninstall it first) with the correct adapter type.
- The adapter I/O address does not match the I/O address for which the Digi device driver was configured.

Problem

The following error message appears in the Event Viewer:

BIOS image failed to load.... (the exact wording of the error message varies with adapter type)

Causes/Solutions

- There is a conflict with the Memory Base Address you chose during installation. Reconfigure the driver with a different Memory Base Address.
- Shadow RAM is enabled for all or part of the memory address space assigned to the Digi adapter (depending on the adapter, the required address space is 8K, 32K or 64K, beginning at the Memory Base Address you set during driver installation). Check your computer's CMOS setup and make sure that shadowing is disabled for the addresses used by the Digi adapter.
- There is a hardware problem with the adapter. Contact Digi Technical Support.

Problem

The following error message appears in the Event Viewer:

```
While validating that COM3 was really a serial port, the
contents of the divisor latch register was identical to the
interrupt enable and the receive registers. The device is
assumed not to be a serial port and will be deleted.
```

Causes/Solutions

You may have configured one or more non-intelligent ports with the same name(s) as ports on the Digi adapter. The conflict must be removed either by re-mapping the conflicting Digi port or removing the conflicting non-intelligent port configuration.

The conflicting non-intelligent port may have been configured by making changes within the Control Panel Ports applet. You may correct these changes either from within the Control Panel Ports applet, or with the Registry Editor. If you are unsure of how to do this, call Digi Technical Support.

Appendix A—MS Loopback Adapter

If you have not previously installed an Ethernet or other network interface card, you may get a message stating that Microsoft Networking is not installed. If this occurs, you need to install MS Loopback Adapter, a software network interface emulator which enables the computer to connect to network resources which are actually local. MS Loopback is provided on your Windows NT system CD-ROM or diskettes. To install MS Loopback on your system, follow these steps:

NT 4.0

1. From the Windows NT Control Panel, select Network.
2. When the system displays: “Windows NT Networking is not installed. Do you want to install it now?”, answer “Yes”.
3. You will be asked if your computer is wired to the network or connected via Remote Access (modem); answer “Wired to the Network”, and click Next.
4. Setup will now offer to search for a network card. Click “Select from list”.
5. You will see a dialog box with a list of adapters. Scroll down to “MS Loopback”, select it, and click Next.
6. When asked to choose a network protocol, pick NetBEUI and click Next.
7. You will be asked to specify what network services to install. Click Next to accept the defaults.
8. Click Next again to start the installation.
9. When asked for a directory path, enter **d:\i386** (for Intel processors; use **d:\alpha** for Alpha systems) and load your Windows NT CD-ROM. This assumes that your CD-ROM drive is drive D:.
10. When asked for the Frame Type, select 802.3 and click Continue.
11. You will now see the network bindings page. Click Next to accept the bindings.
12. Click Next to start the network.
13. Enter the name of your computer and workgroup and click Next.
14. Restart your computer to activate Windows NT Networking.

NT 3.51

1. From the Windows NT Control Panel, select Network.
2. When the system displays: "Windows NT Networking is not installed. Do you want to install it now?", answer "Yes".
3. When asked for a directory path, enter **d:\i386** (for Intel processors; use **d:\alpha** for Alpha systems) and load your Windows NT CD-ROM. This assumes that your CD-ROM drive is drive D:.
4. Setup will offer to search for a network adapter card. Click "Do Not Detect".
5. Setup will report that it did not detect a network adapter. Click Continue.
6. You will see the Add Network Adapter dialog box. Click the arrow in the list box to see a list of adapters. Find MS Loopback Adapter, select it, and click Continue.
7. When asked for the Frame Type, select 802.3 and click Continue.
8. When asked to choose a network protocol, pick NetBEUI and click Continue.
9. You will now see the Network Settings box. Click OK to complete the installation.
10. Restart your computer to activate Windows NT Networking.