DECpc AXP 150 and DEC 2000 Model 300 AXP

Adaptec AHA-1742A SCSI Adapter User Information

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This manual describes how to install, configure, and use the Adaptec AHA-1742A SCSI adapter for the DEC 2000 Model 300 AXP and DECpc AXP 150 systems.

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Contents

Preface v

1 Installing the SCSI Adapter

Introduction 1–1
About the AHA-1742A SCSI Adapter 1–1
In This Chapter 1–1
Preparing to Install the SCSI Adapter 1–2
Before You Begin 1–2
Disabling the Floppy Controller 1–3
Disabling the Floppy Controller 1–3
Removing the Onboard SCSI Terminators 1–4
Removing the Onboard SCSI Terminators 1–4
Installing the SCSI Adapter 1–5
Installation Procedure 1–5
Connecting External SCSI Devices 1–6
Connection Procedure 1–6
Connection Illustration 1–7
Testing the SCSI Connection 1–8
Updated SHOW DEVICE Display 1–8

2 Configuring the SCSI Adapter

Introduction 2–1
In This Chapter 2–1
EISA Configuration Utility (ECU) 2–2
Running the ECU 2–2
Changing the Configuration 2–2
Default Configuration 2–3

3 Troubleshooting

Summary 3–1
Identifying and Solving Problems 3–1

A Specifications

Introduction A–1
In This Appendix A–1
SCSI Adapter Specification A–2
SCSI Adapter Specification Summary A–2
SCSI Port Pin Specification A–3
Summary A–3
SCSI Port Illustration A–3
SCSI Port Pin Specification A–3

Index

Examples

1–1 Updated SHOW DEVICE Display 1–8

Figures

1–1 Disabling the Floppy Controller 1–3
1–2 Removing the SCSI Terminators 1–4
1–3 Connecting an External SCSI Device 1–7
A–1 SCSI Port A–3

Tables

1–1 Preinstallation Procedure 1–2
1–2 Connecting External Devices 1–6
1–3 Testing the SCSI Connection Using the SHOW DEVICE Display 1–8
2–1 Configuration Settings 2–2
2–2 Default Configuration 2–3
3–1 Troubleshooting Table 3–1
A–1 Specification Table A–2
A–2 SCSI Port Pin Specification A–3

Preface

Purpose of This Manual

This manual describes how to install, configure, and use the Adaptec AHA-1742A SCSI adapter in the DEC™ 2000 Model 300 AXP™ or DECpc™ AXP 150 systems.

Audience

This manual is intended for anyone installing, configuring, or using the Adaptec AHA-1742A SCSI adapter in the DEC 2000 Model 300 AXP or DECpc AXP 150 systems. It is written for both experienced and inexperienced users.

Structure of This Manual

This manual contains three chapters, an appendix, and an index as follows:

- Chapter 1 describes how to install and use the SCSI adapter.
- Chapter 2 describes how to configure the SCSI adapter.
- Chapter 3 contains troubleshooting information.
- Appendix A lists the specifications for the SCSI adapter.
- The index is a reference to the main topics in the manual.

Associated Information

See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* manual for associated information.

Conventions

The following conventions are used in this manual:

Convention	Description
`monospace`	Text displayed on the screen is shown in monospace type.
italic type	Italic type emphasizes important information, indicates variables, and indicates complete titles of manuals.
n.nn	A period in numerals signals the decimal point indicator. For example, *1.75* equals *one and three-fourths*.
UPPERCASE	Words in uppercase indicate a command.
n	A lowercase italic *n* indicates the generic use of a number. For example, 19*nn* indicates a 4-digit number in which the last 2 digits are unknown.
Note	A note contains information of special importance to the reader.
Caution	A caution contains information to prevent damage to the equipment.

1

Installing the SCSI Adapter

Introduction

This chapter describes how to install and connect the AHA-1742A SCSI adapter.

About the AHA-1742A SCSI Adapter

The AHA-1742A SCSI adapter provides a diskette drive controller and it allows you to connect up to seven SCSI devices, either internal or external, to the system.

In This Chapter

This chapter contains the following sections:

- Preparing to Install the SCSI Adapter
- Disabling the Floppy Controller
- Removing the Onboard SCSI Terminators
- Installing the SCSI Adapter
- Connecting External SCSI Devices

Preparing to Install the SCSI Adapter

Before You Begin

Before you install the AHA-1742A SCSI adapter, you must determine if it is the first or the second SCSI adapter in the system. If it is the second SCSI adapter in the system, you must disable the floppy disk controller. You must also decide whether you are using the SCSI adapter to connect internal or external SCSI devices to the system. Table 1–1 describes the actions you should take.

Table 1–1 Preinstallation Procedure

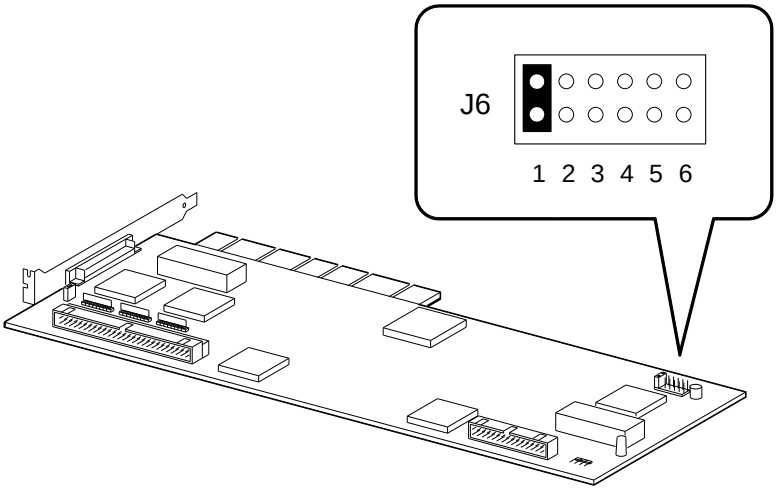
Adapter	Internal Devices	External Devices
First	No action required.	If you are ready to connect the external SCSI devices immediately after installing the SCSI adapter, remove the terminators from the SCSI adapter. See the section entitled Removing the Onboard SCSI Terminators for information on removing the terminators.
Second	No internal device connections permitted.	If you are connecting external devices, do the following: 1. Disable the floppy controller on the SCSI adapter. See the section entitled Disabling the Floppy Controller for information on disabling the floppy controller. 2. If you are ready to connect the external SCSI devices immediately after installing the SCSI adapter, remove the terminators from the SCSI adapter. See the section entitled Removing the Onboard SCSI Terminators for information on removing the terminators.

Disabling the Floppy Controller

Disabling the Floppy Controller

If you are installing a second SCSI adapter in the system, you must disable the floppy disk controller on the second SCSI adapter. To disable the floppy controller, remove the jumper from pin number 1 of J6 on the SCSI adapter. Figure 1–1 shows the default position of the jumper.

Figure 1–1 Disabling the Floppy Controller

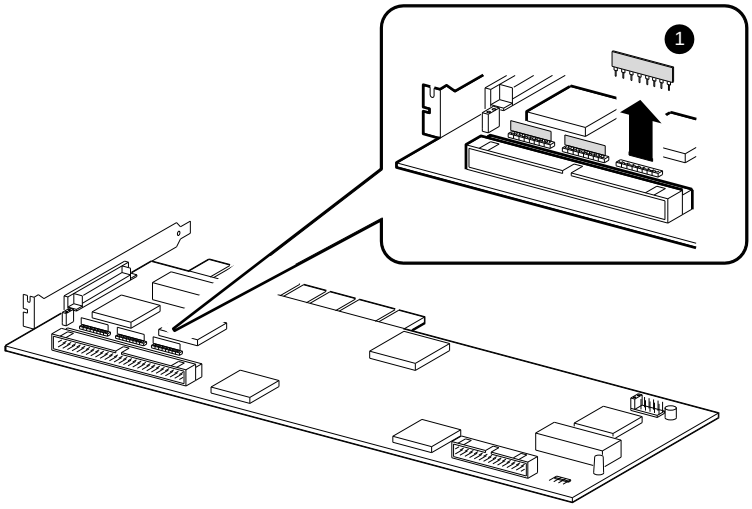


Removing the Onboard SCSI Terminators

Removing the Onboard SCSI Terminators

If you want to connect external SCSI devices to the system unit, you must remove the three onboard SCSI terminators from the SCSI adapter. Figure 1–2 shows how to remove the SCSI terminators (❶) from the SCSI adapter.

Figure 1–2 Removing the SCSI Terminators



Installing the SCSI Adapter

Installation Procedure

When you have performed the tasks described in the section entitled Preparing to Install the SCSI Adapter , you are ready to install the SCSI adapter. For information on opening the system unit and installing an option board see the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* manual.

Note

If you are replacing the default SCSI adapter or installing the first SCSI adapter, you must replace the SCSI ribbon cables after you have installed the SCSI adapter.

Connecting External SCSI Devices

Connection Procedure

You must connect all external SCSI devices to the system unit before system power-up. Table 1–2 describes how to connect an external SCSI device to the system.

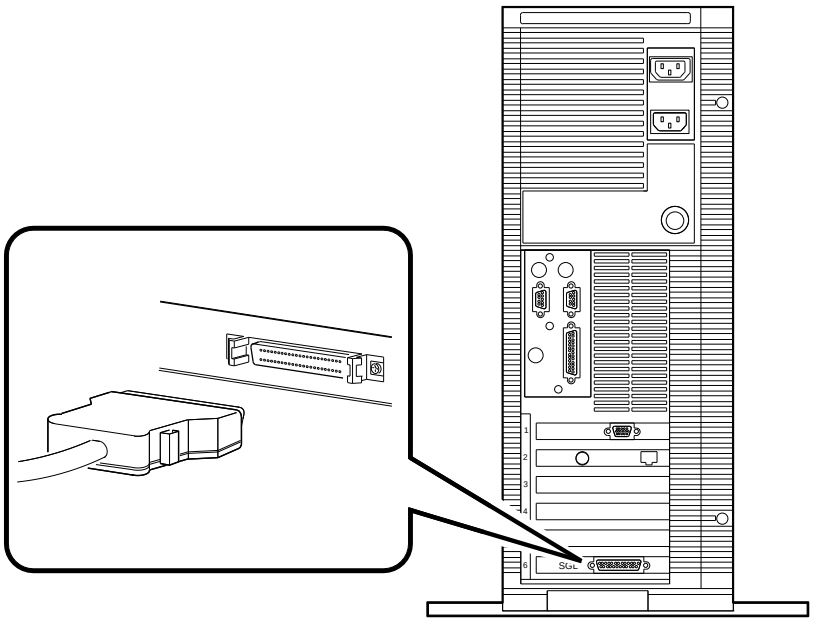
Table 1–2 Connecting External Devices

Step	Action
1	Hold in both connector clips on one end of the SCSI cable and connect it to the SCSI port on the system unit, then release the clips.
2	Connect the other end of the SCSI cable to the SCSI device.
3	Set the on/off switches on the device, on other peripherals connected to the system unit, and on the system unit to the on position.

Connection Illustration

Figure 1–3 shows how to connect the SCSI device to the system unit.

Figure 1–3 Connecting an External SCSI Device



Testing the SCSI Connection

Table 1–3 lists the steps that you must follow to test the SCSI connection.

Table 1–3 Testing the SCSI Connection Using the SHOW DEVICE Display

Step	Action	Result
1	Enter the SHOW DEVICE command (❶) to display the SCSI configuration.	The system responds with a display similar to Example 1–1.
2	Examine the BOOTDEV column (❷) to make sure that all the devices are listed.	If a device is not listed, see Chapter 3 for information on troubleshooting.
3	Examine the ADDR column (❸) to make sure that the SCSI ID in each SCSI address is unique.	If the SCSI ID is not unique, you must reset the SCSI ID on the new device to an unused SCSI ID. See the device documentation for information on setting the SCSI IDs.

Updated SHOW DEVICE Display

Example 1–1 shows a sample of an updated SHOW DEVICE display.

Example 1–1 Updated SHOW DEVICE Display

```
>>> SHOW DEVICE ❶
    ❷          ❸
BOOTDEV      ADDR      DEVTYPE    RM/FX    DEVNAM      REV     NUMBYTES
-------      ----      -------    -----    ------      ---     --------
DKA0         A/0/0     DISK       FX       RZ25                426.25MB
DKA100       A/1/0     DISK       FX       RZ25                426.25MB
MKA200       A/2/0     TAPE       RM       TZK10             0.00KB
DKA400       A/4/0     RODISK     RM       RRD42               ......
HOST         A/7/0     PROC                AHA1742/A   A
```

2

Configuring the SCSI Adapter

Introduction

This chapter describes how to configure the system after you have installed the AHA-1742A SCSI adapter.

In This Chapter

This chapter contains the following section:

- EISA Configuration Utility (ECU)

EISA Configuration Utility (ECU)

Running the ECU

To configure the Ethernet controller within the system or to change the configuration settings, you must run the ECU. See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* manual for information on running the ECU.

Changing the Configuration

You can use the ECU to change the configuration of the SCSI adapter. Table 2–1 shows the functions and the corresponding choice of settings that are available for the AHA-1742A SCSI adapter.

Table 2–1 Configuration Settings

Function	Choice of Settings
Host Adapter Interface	Enhanced mode only
Host Adapter BIOS	BIOS Base Address CC000H BIOS Base Address D0000H BIOS Base Address D4000H BIOS Base Address D8000H BIOS Base Address DC000H BIOS Base Address E0000H BIOS Base Address E4000H BIOS Base Address E8000H BIOS Base Address EC000H BIOS Base Address C8000H BIOS Disabled
Host Adapter SCSI ID	Device ID 7 Device ID 6 Device ID 5 Device ID 4 Device ID 3 Device ID 2 Device ID 1 Device ID 0
SCSI Bus Reset at Power-on	Enable SCSI Bus Reset Disable SCSI Bus Reset

Default Configuration

Table 2–2 shows the default configuration settings for the AHA-1742A SCSI adapter.

Table 2–2 Default Configuration

Function	Default Setting
Host Adapter Interface	Enhanced Mode
Host Adapter BIOS	BIOS Base Address CC000H
Host Adapter SCSI ID	Device ID 7
SCSI Bus Reset at Power-on	Enable SCSI Bus Reset

3
Troubleshooting

Summary

This section describes some of the problems that can occur with the AHA-1742A SCSI adapter. It suggests possible causes for the problems and actions that you can take to correct them.

Identifying and Solving Problems

Table 3–1 describes how to identify and solve problems by interpreting correctly the symptoms that are occurring.

Table 3–1 Troubleshooting Table

Symptom	Possible Cause	Recommended Action
The SCSI adapter device name does not appear in the power-up self-test display.	The SCSI adapter is not seated firmly.	Remove the SCSI adapter and reinsert it *firmly* in the option slot.
	The SCSI adapter is not correctly configured or the configuration conflicts with another installed option board.	Use the ECU to check the configuration and if necessary, reconfigure the SCSI adapter to resolve the conflict.
The SHOW DEVICE display does not include all of the SCSI devices.	The device IDs are set incorrectly.	Check that each SCSI device connected to the SCSI bus has a unique SCSI ID.

(continued on next page)

Table 3–1 (Cont.) Troubleshooting Table

Symptom	Possible Cause	Recommended Action
	The SCSI cable or device is faulty.	Replace the SCSI cable or device. See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for more information on replacing cables and devices.
The SHOW DEVICE display does not include the floppy disk.	The diskette drive is faulty or the ID select switch is positioned incorrectly.	See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for more information.
	The SCSI adapter or the system board is faulty.	See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for more information. If the problem persists, contact your system administrator.
You cannot read or write from a SCSI device.	The media is faulty.	See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for more information on troubleshooting the SCSI drive.
	The error could be a system error.	Enter the SHOW DEVICE command to display the device configuration.
System displays a SCSI device error.	SCSI bus is not properly terminated.	If external devices are connected to the system, check that they are terminated correctly. If there are no external devices connected to the system, check that the SCSI adapter and the end of the SCSI cable are terminated correctly.

(continued on next page)

Table 3–1 (Cont.) Troubleshooting Table

Symptom	Possible Cause	Recommended Action
	The SCSI adapter is faulty.	See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for information on testing the SCSI adapter.
	The error code could be a system error code.	See the *DECpc AXP 150 and DEC 2000 Model 300 AXP Customer Technical Information* for more information. If the problem persists, contact your system administrator.

A

Specifications

Introduction

This appendix lists the specifications for the AHA-1742A SCSI adapter and the SCSI port.

In This Appendix

This appendix contains the following sections:

- SCSI Adapter Specification
- SCSI Port Pin Specification

SCSI Adapter Specification

SCSI Adapter Specification Summary

Table A–1 lists the physical specifications for the AHA-1742A SCSI adapter.

Table A–1 Specification Table

Power Requirements	
DC Amps @ 5V ± 0.25V	2.9 Amps (maximum)
Operating Environment	
Operating temperature	0°C to 55°C
Storage temperature	– 40°C to 75°C
Relative humidity	10% to 95% (non-condensing)
EISA Identification	
Adaptec AHA-1742A SCSI Adapter	ADP0002

SCSI Port Pin Specification

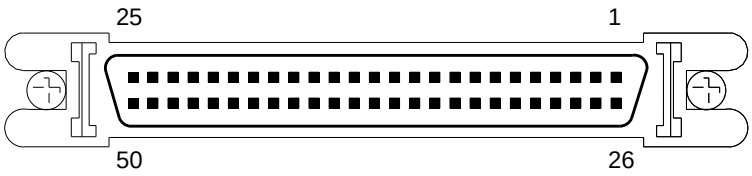
Summary

This section lists the pin specifications for the SCSI port.

SCSI Port Illustration

Figure A–1 shows the pin numbers on the SCSI port.

Figure A–1 SCSI Port



GA_EN00290A_93A

SCSI Port Pin Specification

Table A–2 describes the functions of the pins on the SCSI port.

Table A–2 SCSI Port Pin Specification

Pin	Function	Pin	Function
1	Chassis ground	26	SCSI bus data 0
2	Chassis ground	27	SCSI bus data 1
3	Chassis ground	28	SCSI bus data 2
4	Chassis ground	29	SCSI bus data 3
5	Chassis ground	30	SCSI bus data 4
6	Chassis ground	31	SCSI bus data 5
7	Chassis ground	32	SCSI bus data 6
8	Chassis ground	33	SCSI bus data 7
9	Chassis ground	34	SCSI bus data parity
10	Chassis ground	35	Chassis ground
11	Chassis ground	36	Chassis ground

(continued on next page)

Table A–2 (Cont.) SCSI Port Pin Specification

Pin	Function	Pin	Function
12	Chassis ground	37	Chassis ground
13	Not used	38	Term power
14	Chassis ground	39	Chassis ground
15	Chassis ground	40	Chassis ground
16	Chassis ground	41	SCSI bus ATN
17	Chassis ground	42	Chassis ground
18	Chassis ground	43	SCSI bus BSY
19	Chassis ground	44	SCSI bus ACK
20	Chassis ground	45	SCSI bus RST
21	Chassis ground	46	SCSI bus MSG
22	Chassis ground	47	SCSI bus SEL
23	Chassis ground	48	SCSI bus CD
24	Chassis ground	49	SCSI bus REQ
25	Chassis ground	50	SCSI bus I/O

Index

C

Configuring the SCSI adapter
  changing the configuration, 2–2
  configuration settings, 2–2
  running the ECU, 2–2

E

EISA Configuration Utility, 2–2
External SCSI devices, 1–2
  connecting, 1–6
  testing the connection, 1–8

F

Floppy controller, 1–2
  disabling, 1–3

I

Installing the SCSI adapter
  installation procedure, 1–5
  preparation, 1–2
Internal SCSI devices, 1–2

S

SCSI devices
  external, 1–2
  internal, 1–2
SCSI ribbon cables, 1–5
SCSI terminators
  removing, 1–4
Specifications
  SCSI adapter specification, A–2
  SCSI port pin specification, A–3

T

Troubleshooting, 3–1