

NEXTSTEP for Intel Processors

Title: The Adaptec 1542B and 1540B ISA SCSI Cards

Entry Number: 1107

Last Updated: 1 April 1994

Document Revision: 0494A

Product Vendor:

Adaptec Inc.

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Keywords: Adaptec, SCSI, ISA, 1542, 1540

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Usage Commentary:

The Adaptec 1542B provides a standard ISA SCSI interface for NEXTSTEP for Intel Processors. The card

requires minimal setup and has proven to be reliable.

The driver for the Adaptec1542B also supports the Adaptec 1540B, which provides identical SCSI functionality without an integrated floppy controller. NEXTSTEP Releases 3.1 and 3.2 do not officially support the floppy controller on the Adaptec1542B, so the lack of this feature on the Adaptec 1540 is a minor concern for NEXTSTEP users.

Adaptec has discontinued production of the 1542B in favor of the newer 1542CF.

Release 3.2

Update 1 of the Adaptec 154x SCSI driver is now available from NeXTanswers via anonymous FTP (ftp.next.com) or email (nextanswers@next.com). Request document numbers 1521, "1521_Adaptec154xDriver.pkg.compressed," and 1520, "1520_Adaptec154xDriver.ReadMe.rtf." This update provides enhanced functionality and bug fixes. NeXT recommends upgrading to this driver.

Setup and Installation:

Follow the instructions provided with the card to disable the floppy controller. This involves removing a row of jumpers in the middle of the board. This change is not necessary on the 1540B.

Adaptec 1542B cards must have the boot SCSI disk set to SCSI ID 0.

Synchronous SCSI support is provided in the card's firmware. Note that the NeXT recommended configuration for the host adapter board currently disables the initiation of synchronous negotiation. This is the conservative approach since some devices have problems with this process.

Known Problems:

Releases 3.1 and 3.2

- Certain Adaptec 1542B adapters with recent firmware are capable of accessing hard drives with a capacity of greater than one gigabyte. This is not supported under Release 3.1. Under Release 3.2, this is supported by a driver update. See "Usage Commentary."

- NEXTSTEP does not officially support the floppy controller integrated into the 1542B. Use the floppy controller integrated into your system's motherboard or purchase a separate floppy controller to complete software installation.
- When installing NEXTSTEP onto an IDE hard disk drive, the CD-ROM drive's SCSI ID number should be zero.
- Some users have reported problems during the installation process if the CD-ROM drive's SCSI ID number is set to zero. NEXTSTEP will freeze after displaying the message "rootdev 608" when this problem is encountered. Setting the CD-ROM drive's SCSI ID to six has fixed the problem when nothing else seemed to work.
- Improper SCSI termination can cause strange, unreproducible errors. Be certain that the first and last devices on the SCSI bus (and only these two devices) are terminated. For more information on this topic, see NeXTanswers document number 1109, "SCSI Setup."
- Avoid system configurations combining an Adaptec 154xB/C/CF and an ATI Ultra Pro EISA card. A hardware conflict exists which causes data corruption on SCSI hard disks.
- If your system includes an Adaptec 1542B and you do not have jumper six enabled it will hang. It will boot off the floppy and recognize the SCSI drives, but instead of starting the install process, it will hang with the messages:

fdisk: bogus bios info
some bios' can't handle non-sequential targets.
- The Adaptec 1542B does not support 2.88MB floppy drives attached as SCSI devices.
- See also NeXTanswers document number 1541, "1541_Adaptec_Driver_Related_Problems.rtf."