

Install Documentation for IBM HHLTO GEN 2 Device Drivers

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Build ID: HHLTO2_DRVS_T

Revision: 1.0.0.0

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Updated: 11/9/2005

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1.0 Overview:

The IBM LTO device driver download contains a level of the device driver with its associated resource files and utilities. This driver will be installed in the IBM LTO directory.

2.0 Change History:

Version	Description
-----	-----
1.0.0.0	Initial Release

3.0 Installation and setup instructions:

This chapter describes how to install, the Microsoft Tape Device Driver for the IBM HHLTO GEN 2 devices.

Installation overview

The installation process consists of the following steps:

1. Install the host bus adapters and drivers.
2. Copy the IBM HHLTO GEN 2 device driver files to your hard disk.
3. Shut down the system.
4. Connect the IBM HHLTO GEN 2 device to the host bus adapters.

Figure A. Computer Management Console

5. Power on the IBM HHLTO GEN 2 device.
6. Set the IBM HHLTO GEN 2 device address.
7. Reboot the system.
8. Log on as Administrator.
9. Install and configure the devices and device drivers using the Device Manager.

Installation Procedures.

1. Log on as Administrator.
2. Insert the IBM User Guide CD in the CD-ROM drive and locate the driver files **Tape.inf & tnbg_lto.sys** in the Device Driver/Windows folder.
3. Restart the system and log on as Administrator.
The **Found New Hardware Wizard** may start and indicate that tape devices were found. Experienced users may use this wizard to complete the installation of the devices. If you see the wizard and wish to continue this documentation as outlined, select cancel and proceed to step 6. If the **Found New Hardware Wizard** does not start, proceed to step 6.
4. Right click **My Computer** on your desktop and select Manage.
5. After a few seconds, Computer Management console opens. See Figure A.

Found New Hardware Wizard



Welcome to the Found New Hardware Wizard

This wizard helps you install software for:

IBM HH LTO Gen 2



If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

- Install the software automatically (Recommended)
- Install from a list or specific location (Advanced)

Click Next to continue.

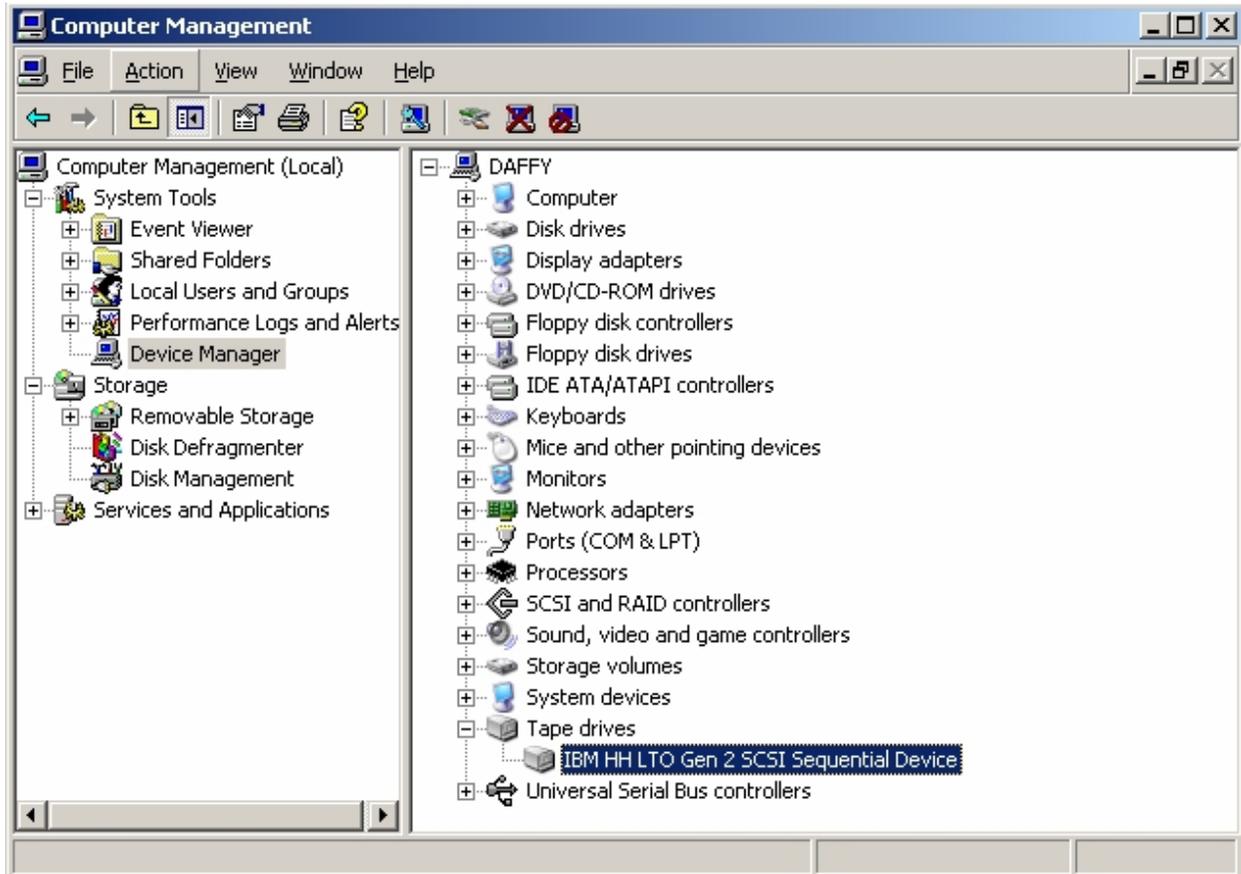
< Back

Next >

Cancel

6. In the **Device Manager** tree, find the IBM HHLTO GEN 2 devices you are installing. Tape devices may be located under the Tape drives node. See Figure B.

Figure B. Computer Management Console with IBM HHLTO GEN 2 Device Selected



7. Right-click the IBM HHLTO GEN 2 device and select **Properties**.

8. A window opens. Click **Re-install Driver....** See Figure C. If there is no **Re-install Driver...** button on your screen, click on the Driver tab and then click **Update Driver.**

Figure C. Device Driver Properties with Reinstall Driver... selected



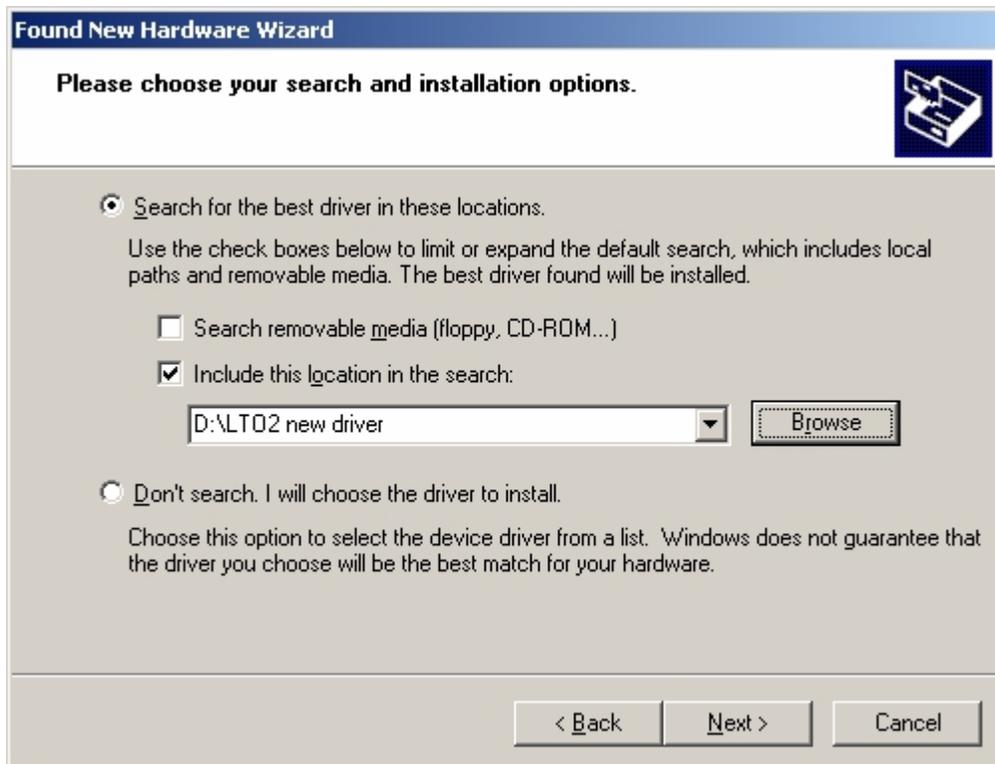
9. An **Upgrade Device Driver Wizard** window opens. Click **Next >** to open the window shown in Figure D. Click, **Search for a suitable driver for my device (recommended)**, click **Next >**. A **Locate Driver Files** screen appears. See Figure E.

Figure D. Install Hardware Device Drivers Dialog



10. Select the **Specify a location** checkbox and clear all other checkboxes. Click **Next >**.

Figure E. Locate Driver Files Screen with Specify a location selected



11. A screen appears with a prompt for the location of the device driver files. You should specify the directory into which you unzipped the driver files. For example, if you unzipped the files into d:\Driver Install, you would type d:\Driver Install in the edit. See Figure F.



Figure F. Specifying the Location of the Driver

This directory contains the most recent versions of the driver (with .sys extensions), the information files (with .inf extensions), the utility programs (with .exe extensions), and a copy of this documentation.

Click OK.

12. After a brief moment of searching, the operating system should present the **Driver Files Search Results** screen. Figure G contains an example of a screen that will be presented when it finds an IBM HHLTO GEN 2 drive. Depending on the device you are installing, this and subsequent screens may have minor differences. Click **Next >**.

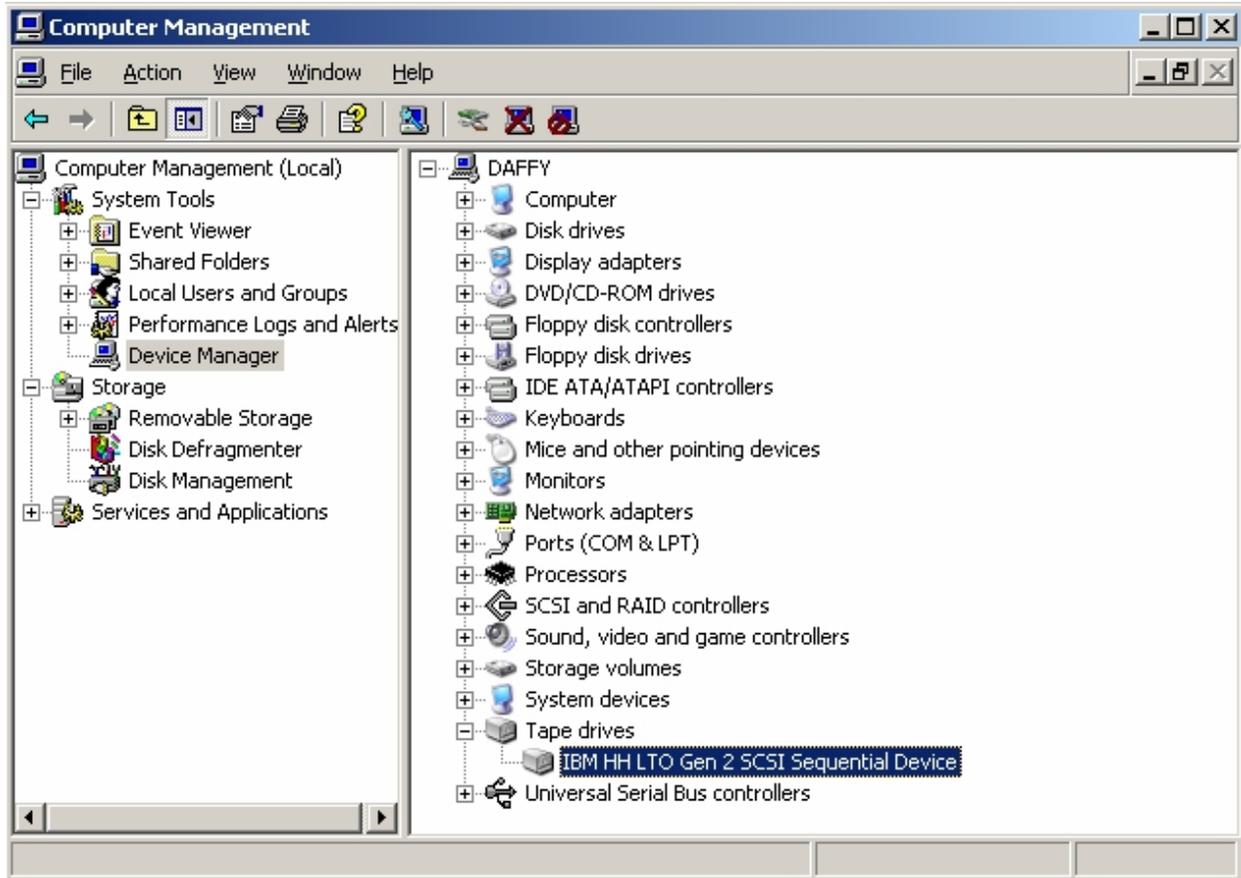
Figure G. Driver Files Search Results



13. If the installation was successful, you will be prompted to click **Finish** to complete the installation process.

14. You should be able to verify that the device was installed correctly. See Figure I. Repeat steps 8-15 for every drive you install.

Figure I. Verifying that the IBM HHLTO GEN 2 Device was installed correctly



4.0 Configuration Information:

If the driver is being re-installed or updated you may be asked to reboot for the driver to take effect. Otherwise no reboot should be needed.

The IBM LTO tape drive is now installed and ready to use.

Windows 2000 and Server 2003 uses two programs to manage tape backups -- 'Removable Storage Manager' and 'Backup'.

Note: Windows XP Home does not currently supply a tape backup application.

Removable Storage Manager, at a lower level, recognizes removable storage devices (such as tape drives) and their media (such as tapes). Removable Storage Manager maintains a data base of tapes which is organized by 'allocating' tapes to various media 'pools'.

The Backup program, at a higher level, backs up and restore system files. Backup uses services of Removable Storage Manager to gain access to tapes.

To verify that Removable Storage Manager has recognized the tape drive --

Right click 'My Computer' and select 'Manage'.

In 'Computer Management', follow the tree

Computer Management (local)

- Storage

- Removable Storage ->

- Physical Locations [for Windows 2000],

- Libraries [for Windows XP, Server 2003],

In this tree, you should see an entry similar to:

'IBM DDS Gen5 SCSI Sequential Device'.

For help on on Removable Storage, click the help icon

and open the 'Removable Storage' book.

For Windows 2000, XP Professional (not XP Home), or Server 2003, you can use the

Start -> Programs -> Accessories -> System Tools -> Backup applet to verify correct tape drive operation.

5.0 HBA Restrictions:

1) Use of Adaptec 39160 Host Bus Adapters with IBM Ultrium Generation I Tape drives.

The Adaptec 39160 HBA is a dual-ported SCSI host bus adapter. The maximum number of IBM tape devices that are supported for this HBA are two IBM tape devices daisy-chained to one port of the HBA and one IBM tape device attached to the other port of the HBA.

2) Use of Adaptec 29160/39160 Host Bus Adapters with IBM Ultrium Generation 2 Tape Drives are limited due to problems encountered with Adaptec 29160 and 39160 SCSI LVD Host Bus Adapters. the IBM Ultrium Generation 2 tape are only supported when the transfer rate for the Ultra 160 Adaptec adapters is reduced from the standard 160 MB/sec. to 80 MB/sec.

Use the following procedure to update your system BIOS SCSI Device Configuration to limit the transfer rate to 80 MB/sec: (Note: these instructions are for BIOS update and are independent of the specific operating system(s), Windows and/or Linux, running on your system.)

1. Terminate all User applications and reboot the host system.
2. Monitor the system console as the system boots and press 'Control A' on the keyboard when messages appear for the Adaptec card(s). This will enter you into the BIOS configuration mode.
3. Choose the Adaptec HBA that you want to reconfigure.
4. Choose "Configure/View SCSI Controller Setting"
5. Under "Additional Options", choose "SCSI Device Configuration"
6. Change "Sync Transfer Rate (MB/sec)" from 160 to 80 under the SCSI ID for your attached tape device.

7. Press the 'escape key', save the changes and reboot your system again.

Information and assistance is available through the IBM Web site and by phone.

6.1 Web sites

IBM Support Web Site:
<http://www.ibm.com/pc/support/>

IBM eServer Web site:
<http://www.ibm.com/eserver/xseries/>

IBM IntelliStation Web site:
<http://www.ibm.com/pc/intellistation/>

6.2 Software service and support

Through IBM Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with xSeries servers, IntelliStation workstations, and appliances. For information about which products are supported by Support Line in your country or region, go to <http://www.ibm.com/services/sl/products/>.

For more information about Support Line and other IBM services, go to <http://www.ibm.com/services/>, or go to <http://www.ibm.com/planetwide/> for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

6.3 Hardware service and support

You can receive hardware service through IBM Services or through your IBM reseller, if your reseller is authorized by IBM to provide warranty service. Go to <http://www.ibm.com/planetwide/> for support telephone numbers, or in the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

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