

Installation Instructions
Field Feature Bill of Material (FFBM)
For Installing Feature Code 1450 (Multi-Path
Feature)
in a IBM 3583 Model L18/L36/L72



PN 18P8592 EC H80336A 09 JUN 03

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Installation Instructions

Document Number 18P8592 EC H80336A

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Status: Field Use

Note: This Field Feature Bill of Material (FFBM) must be installed only on the IBM 3583 Model L18/L36/L72 for which it was shipped.

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Before Installation (Section 1 through 8)

1.0 Machines/Models Affected

This FFBM affects an IBM 3583 Model L18/L36/L72 enabling the Multi-Path feature in an Ultrium 1 tape library.

2.0 Prerequisite/Concurrent/Companion

2.1 Prerequisites

ATTENTION: Prior to activating the Multi-Path feature you must obtain the conversion utilities from the PFE web site. Refer to section "4.1 Accessing the DLConvert.exe and .dll's" on page 3 for instructions to access the utilities.

The 3583 Model L18/L36/L72, must have feature code 1660 (Remote Management Unit) installed. If it is not installed, refer to the following before continuing.

- • *IBM Installation Instructions FC 1660. Install Remote Management Unit (RMU)/StorWatch Specialist in IBM 3583 Tape Library (PN 19P3848) for 3583*

ATTENTION: The Drives should be updated to firmware level 35V0 (or higher) followed by the update to the RMU to firmware level 175B(or higher). If the customer has not updated the firmware, request that it be done, ask the customer for assistance, or reference the web site listed below.

- 1. The Ultrium 1 drives must be at firmware level 35V0 or higher.
- 2. The RMU must be at firmware level 175B or higher.

To determine the highest level available, visit the web at <http://www.ibm.com/storage/1to>. Be sure you select the latest Ultrium 1 drive firmware.

- Select Technical Support link and check against the firmware level on the library.
- Under **Downloads and Utilities**, select **IBM Ultrium Firmware**.

If a firmware update is required, follow the "**Updating Firmware**" procedure in **Chapter 4** of the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide*.

3.0 Bills of Material to be Installed

PN	Quantity	Description
18P8604	1	Installation Instructions

4.0 Preparation

- Read and understand the purpose and details of this installation instruction.
- Ensure that all items on the bill of materials have been received.
- Work with the customer to schedule the installation of this FFBM.

If the customer is not using the RMU, it will need to be configured in order for you to use it during the upgrade to update firmware to the library components. You must first setup the RMU with an IP address, a subnet mask and a gate

address. Refer to "**Configuring the RMU**" in **Chapter 2** of the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide*. Since the network will consist of the RMU and your laptop, use the IP, subnet mask and gate addresses shown in the example in the Setup and Operator Guide. After setup of the RMU, you must use an Ethernet crossover cable to connect your laptop to the RMU. You can communicate with your laptop to the library through the RMU by selecting either the Internet Explorer or Netscape browsers on your laptop using the IP address you just setup in the RMU using the library operator panel.

4.1 Accessing the DLConvert.exe and .dll's

Prior to performing the 3583 Ultrium 1 Tape Library conversion to enable the Multi-Path feature, the following files must be located in a single directory or folder on your laptop computer. The required conversion files are stored only on the PFE web site which will require an employee name and employee number. The following required files will be found

- DLConvert.exe
- mfc70.dll
- msvcr70.dll
- V5.14.0001 (must be this level or higher to enable the Multi-Path feature)

___ 1. Access the PFE web site <http://snjln02.sanjose.ibm.com/tape/tapetec.nsf/> through a web browser.

Note: This requires a connection to the IBM Intranet.

- ___ 2. Select **3583** from left side of screen
- ___ 3. From the 3583 initial screen, select the **Microcode & Support** section
- ___ 4. Select the **Ultrium 1 Tape Library Conversion**
- ___ 5. Read the Read Me page.
- ___ 6. Select the **DLConvert zip file & Library firmware file** link.
- ___ 7. Select **DLConvert.zip**, fill out the information on the form and click **Submit**.
- ___ 8. Down load the files listed to a directory or folder on your laptop.

Note: This laptop will be used to connect to the Ultrium 1 Tape Library during the conversion.

- ___ 9. After the download completes, press the back button the browser to return to the form.
- ___ 10. Select the **libraryfile (V5_xx_xxxx.lif)**, fill out the information on the form and click **Submit**.
- ___ 11. Once all files have been downloaded, locate the zip file and extract **all three** of the files to the same directory. There will be a DLConvert.exe and two additional .dll files. It is important all three files are in the same directory in order for the DLConvert.exe file to work.

Note: On the Read Me page, there will be additional optional files listed. These can include

- Multi-Path library firmware download executable (**3583LUN1.exe**). This executable can be used to upgrade library firmware on a Multi-Path library **AFTER** the library has been successfully converted from a non-Multi-Path library. Note that this executable is different from the non-Multi-Path firmware upgrade executable that has the name of **download.exe**. The IBM web site, <http://www.ibm.com/storage/lto> will always list both.

- If it is necessary to upgrade Ultrium 1 drive firmware in a non-Multi-Path library prior to conversion using an RMU that has already been upgraded to 175B, it will be necessary to first downlevel the RMU to the 140B level. The two levels of RMU firmware are:
 - a. **175B** (or higher): RMU firmware for libraries with the Multi-Path feature
 - b. **140B**: RMU firmware for non-Multi-Path libraries
- The latest Ultrium 1 Drive firmware (**35V0** or higher)

5.0 Program Updates

The host configuration and cabling will need to be reconfigured to take advantage of feature code 1450 (Multi-Path Feature).

6.0 Purpose and Description

This conversion enables the Multi-Path feature on the 3583 Model L18/L36/L72.

7.0 Installation Time

Machine Hours	System Hours	Number of SSRs
2.0	2.0	1

8.0 Special Tools and Materials Required

- Straight through nine pin serial cable
- Crossover Ethernet cable
- Laptop
- DLConvert executable and the required .dll's (obtained in section "4.1 Accessing the DLConvert.exe and .dll's" on page 3)

Installation (Sections 9, 10, 11 and 12)

9.0 Safety

None

10.0 Details of Installation

ATTENTION: You must have the DLConvert executable and the required .dll's listed in section "4.1 Accessing the DLConvert.exe and .dll's" on page 3 all in the same folder prior to starting this MES.

- ___ 1. Vary the library and tape drives **offline**.

Note: Ask the customer to vary the library and the tape drives in the library offline to the host.

- ___ 2. If the library does not have a Remote Management unit (RMU) you must install feature code 1660 at this time. Refer to *IBM Installation Instructions FC 1660. Install Remote Management Unit (RMU)/StorWatch Specialist in IBM 3583 Tape Library* (PN 19P3848) and return here when complete.
- ___ 3. Verify that the drive firmware is at 35V0 (or higher) as listed in section "2.0 Prerequisite/Concurrent/Companion" on page 2. If the drives are not at 35V0 (or higher), refer to the "**Updating Firmware**" procedure in **Chapter 4** of the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide*
- ___ 4. Verify that the RMU firmware is at 175B (or higher) as listed in section "2.0 Prerequisite/Concurrent/Companion" on page 2. If the RMU is not at 175B (or higher), refer to the "**Updating Firmware**" procedure in **Chapter 4** of the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide*.

10.1 Enable Multi-Path Feature

- ___ 1. Ensure that the library is powered on and that the library and drive initialization is complete.
- ___ 2. Ensure there are no cartridges left in the Ultrium 1 drives. Refer to the **Unloading a Cartridge from a Drive** procedure in **Chapter 4** of the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide*
- ___ 3. Connect a straight through nine pin serial cable from the library serial port to a serial port on the laptop.
- ___ 4. At a command prompt, change to the directory containing the DLConvert.exe and .dll files. (example: type CD yourDirectory) Once in the directory containing the files extracted in the previous steps, type **DLConvert**, and then press *Enter*.

Note: You may also locate the downloaded files through the windows explorer and double click the **DLConvert.exe** icon.

- ___ 5. For assistance with the next steps, refer to Figure 1 on page 6.
- ___ 6. Use the Port pull-down menu to select the communication port to match the port selected on the laptop.
- ___ 7. Verify the **Personalities Check** box is not selected.
- ___ 8. At the **LIF** box, press type in the location and firmware filename or press Browse to locate the firmware V5_xx_xxxx.lif file downloaded earlier.
- ___ 9. Click **LUN** to convert the library from SCSI-based firmware to LUN-based firmware.

- ___ 10. Place a check mark in the **Turn off sleds that could not be found in your system** box.
- ___ 11. Leave the **Send Log To File** box blank.
- ___ 12. Click **OK** to execute the conversion and the firmware download.
- ___ 13. The Processing Download dialog will display the status of the download and indicate when the download is complete.

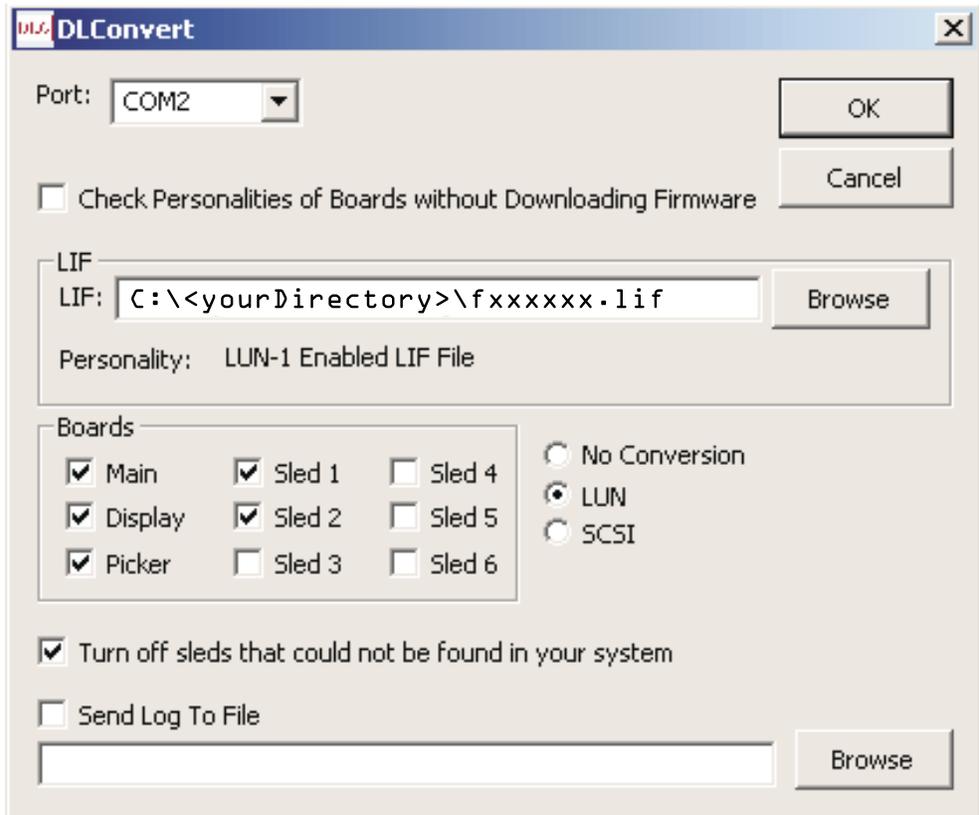


Figure 1. GUI Interface for DLConvert

11.0 Test Procedures

Notify the customer that the cables should be connected differently to take advantage of the new feature installed.

Note: Refer to the *IBM TotalStorage Ultrium Scalable Tape Library 3583 Setup and Operator Guide* to reconfigure the cables.

The host should now be reconfigured to take advantage of the new feature installed. Refer to *IBM Ultrium Device Drivers Installation and User's Guide* located at <ftp://ftp.software.ibm.com/storage/devdvr/Doc> under the file name *IBM_ultrium_tape_IUG.pdf*.

Note: Host software may require updates to take advantage of the Multi-Path feature. Have the customer refer to their host documentation.

12.0 Field Updating

N/A

After Installation (Sections 13 through 15)

13.0 Publications Update

N/A

14.0 Parts Disposition

- ___ 1. Any removed parts that are not designated for reinstallation, shall be considered as the property of the customer.
- ___ 2. Any parts that were supplied, but not required to complete the MES installation will be deemed as the property of IBM. Parts are to be returned to the branch office for proper disposition.

15.0 Machine Records

- ___ 1. Report installation and quality using existing procedures immediately upon completion to ensure that the master history records are updated
- ___ 2. Update the machine history and any other relevant documents to show that the 3583 model L18/L36/L72 has installed feature code 1450 (Multi-Path Feature).