

Re-imaging the Microdrive in the ML300 Evaluation Platform

UG047 (v1.0) April 4, 2003





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The following table shows the revision history for this document.

	Version	Revision
04/01/03	1.0	Initial Xilinx release.

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About This Guide

This guide takes you through the steps to re-image the Microdrive packaged with the ML300 Evaluation Platform (Part Numbers: DO-V2P-ML300, DO-V2P-ML300-WRS).

Additional Resources

For additional information, go to <http://support.xilinx.com>. The following table lists some of the resources you can access from this website. You can also directly access these resources using the provided URLs.

Resource	Description/URL
Tutorials	Tutorials covering Xilinx design flows, from design entry to verification and debugging http://support.xilinx.com/support/techsup/tutorials/index.htm
Answer Browser	Database of Xilinx solution records http://support.xilinx.com/xlnx/xil_ans_browser.jsp
Application Notes	Descriptions of device-specific design techniques and approaches http://support.xilinx.com/apps/appsweb.htm
Data Book	Pages from <i>The Programmable Logic Data Book</i> , which contains device-specific information on Xilinx device characteristics, including readback, boundary scan, configuration, length count, and debugging http://support.xilinx.com/partinfo/databook.htm
Problem Solvers	Interactive tools that allow you to troubleshoot your design issues http://support.xilinx.com/support/troubleshoot/psolvers.htm
Tech Tips	Latest news, design tips, and patch information for the Xilinx design environment http://www.support.xilinx.com/xlnx/xil_tt_home.jsp

Conventions

This document uses the following conventions. An example illustrates each convention.

Typographical

The following typographical conventions are used in this document:

Convention	Meaning or Use	Example
Courier font	Messages, prompts, and program files that the system displays	speed grade: - 100
Courier bold	Literal commands that you enter in a syntactical statement	ngdbuild <i>design_name</i>
Helvetica bold	Commands that you select from a menu	File → Open
	Keyboard shortcuts	Ctrl+C
<i>Italic font</i>	Variables in a syntax statement for which you must supply values	ngdbuild <i>design_name</i>
	References to other manuals	See the <i>Development System Reference Guide</i> for more information.
	Emphasis in text	If a wire is drawn so that it overlaps the pin of a symbol, the two nets are <i>not</i> connected.
Square brackets []	An optional entry or parameter. However, in bus specifications, such as bus[7:0] , they are required.	ngdbuild [<i>option_name</i>] <i>design_name</i>
Braces { }	A list of items from which you must choose one or more	lowpwr = { on off }
Vertical bar	Separates items in a list of choices	lowpwr = { on off }
Vertical ellipsis . . .	Repetitive material that has been omitted	IOB #1: Name = QOUT' IOB #2: Name = CLKIN' . . .
Horizontal ellipsis ...	Repetitive material that has been omitted	allow block <i>block_name</i> <i>loc1 loc2 ... locn</i> ;

Online Document

The following conventions are used in this document:

Convention	Meaning or Use	Example
Blue text	Cross-reference link to a location in the current document	See the section “ Additional Resources ” for details. Refer to “ Title Formats ” in Chapter 1 for details.
Red text	Cross-reference link to a location in another document	See Figure 2-5 in the <i>Virtex-II Handbook</i> .
Blue, underlined text	Hyperlink to a website (URL)	Go to http://www.xilinx.com for the latest speed files.

Re-imaging the Microdrive in the ML300 Evaluation Platform

Introduction

This guide takes you through the steps to re-image the Microdrive packaged with the ML300 Evaluation Platform (Part Numbers: DO-V2P-ML300, DO-V2P-ML300-WRS).

Disclaimer

Xilinx can *not* take responsibility for lost data or damaged hard drives.

Requirements:

- Microsoft® Windows® 2000 or Windows XP (the screenshots below are from Windows 2000)
- Successful ML300 CD1 installation
- Compact Flash or PCMCIA adapter for the Microdrive
- Unzipped Microdrive Image file in your c:\ML300 directory: md.img.v2pdk
- Image file from the ML300 lounge. You must register your ML300 first.
<http://www.xilinx.com/ise/embedded/ml300/members/index.htm>
- Backup copy of the Microdrive that you are imaging

Caution! If you do not make a backup copy of the Microdrive you are imaging, you will lose ALL the changes you made and ALL the data that you added.

Procedure

1. *Make a backup copy* of the Microdrive that you are imaging.

Caution! If you do not make a backup copy of the Microdrive you are imaging, you will lose ALL the changes you made and ALL the data that you added.

2. Browse to the area containing the drive number of the Microdrive.

Right click **My Computer** → **Manage**

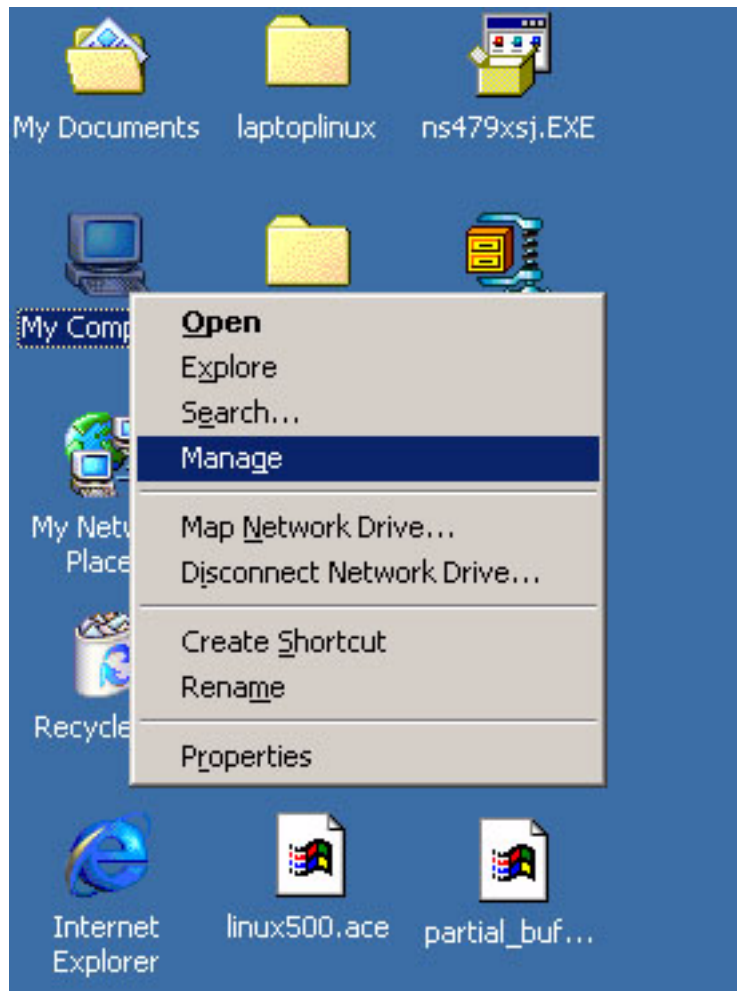


Figure 1: Path to Locate Microdrive Drive Number

- Continue browsing.

Choose **Storage** → **Disk Management**

In the lower right window pane, locate the disk number of the Microdrive (MICRODR). In the example in [Figure 2](#), the disk number is Disk 2, Removable 1.00GB Online.

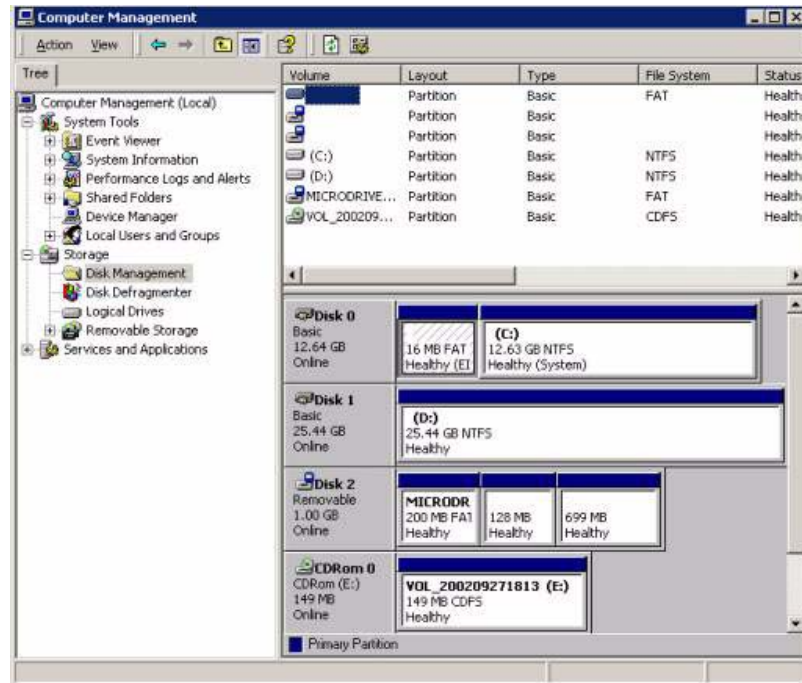


Figure 2: Locate Drive Number

- Start a V2PDK shell.

Start → **Programs** → **ML300 Evaluation Platform** → **V2PDK Shell**

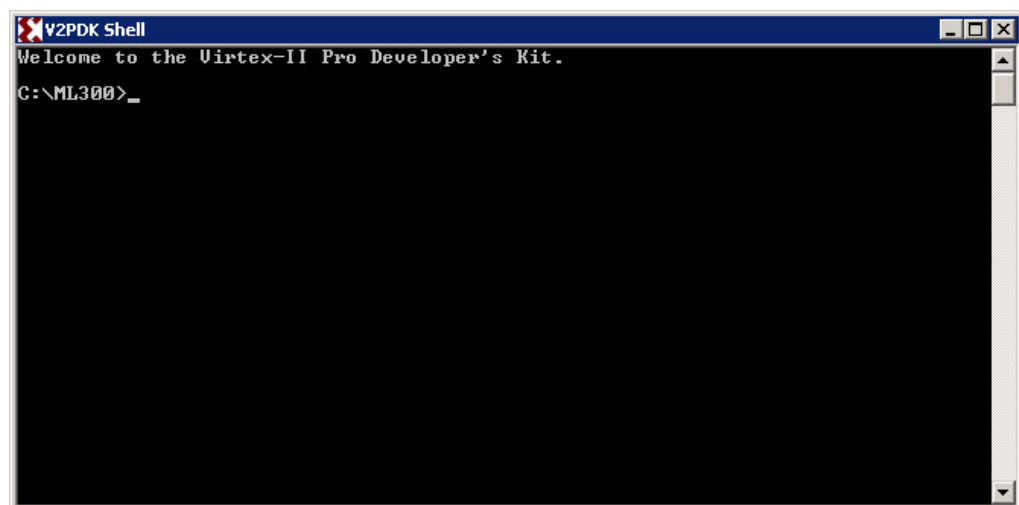


Figure 3: Start a V2PDK Shell

- From the V2PDK shell, start a bash shell.

C:\ML300 → **bash**

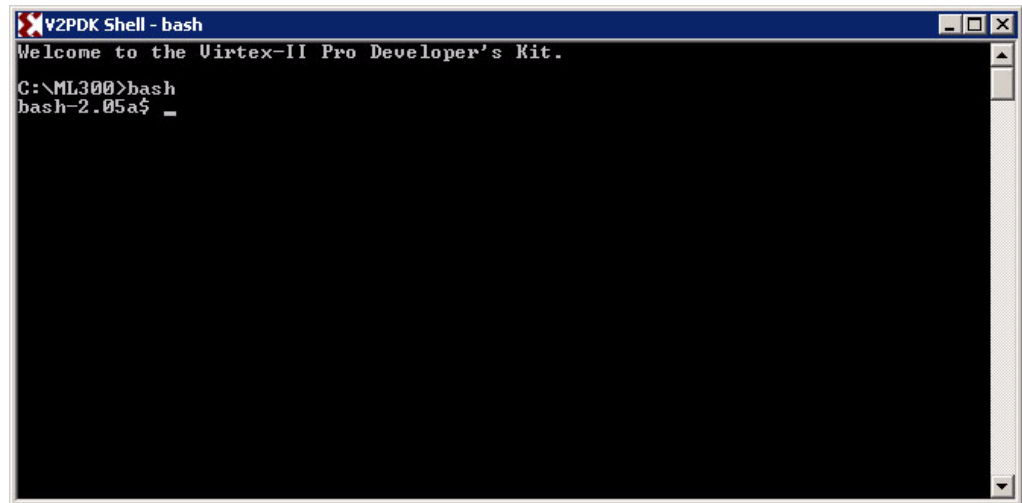


Figure 4: Start a bash Shell

- Mount the Microdrive.

Note: Replace the x with the drive number you found in step 1.

```
bash-2.05a$ mount -b -s -f //./PHYSICALDRIVEx /dev/hd0x
```

The example in Figure 5 shows:

```
mount -b -s -f //./PHYSICALDRIVE2 /dev/hd02
```

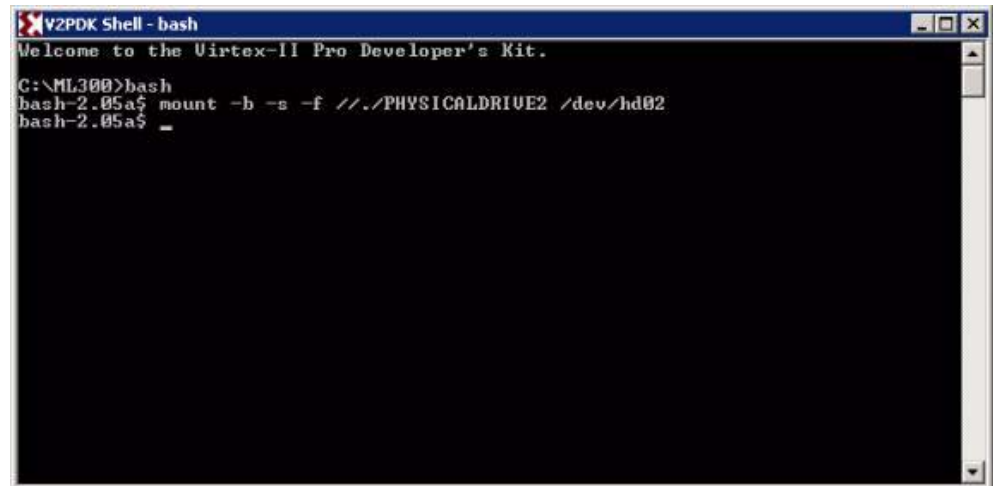


Figure 5: Mount the Microdrive

7. Write the disk image to the Microdrive.

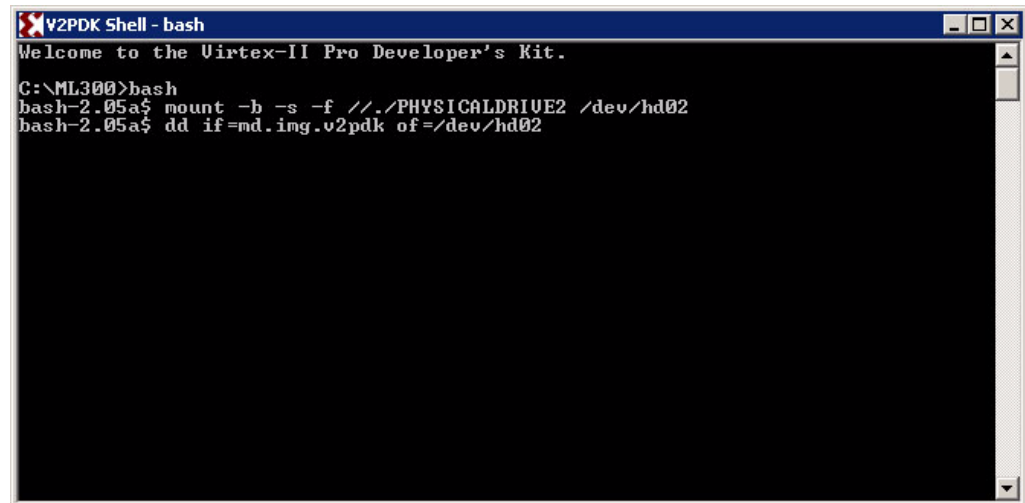
Caution! Make sure that you are imaging the correct disk! Choosing the wrong disk number will result in the loss of important data and/or in an unbootable system on your host machine!

Note: Replace the x with the drive number you found in step 1.

```
bash-2.05a$ dd if=md.img.v2pdk of=/dev/hd0x
```

The example in [Figure 6](#) shows:

```
dd if=md.img.v2pdk of=/dev/hd02
```

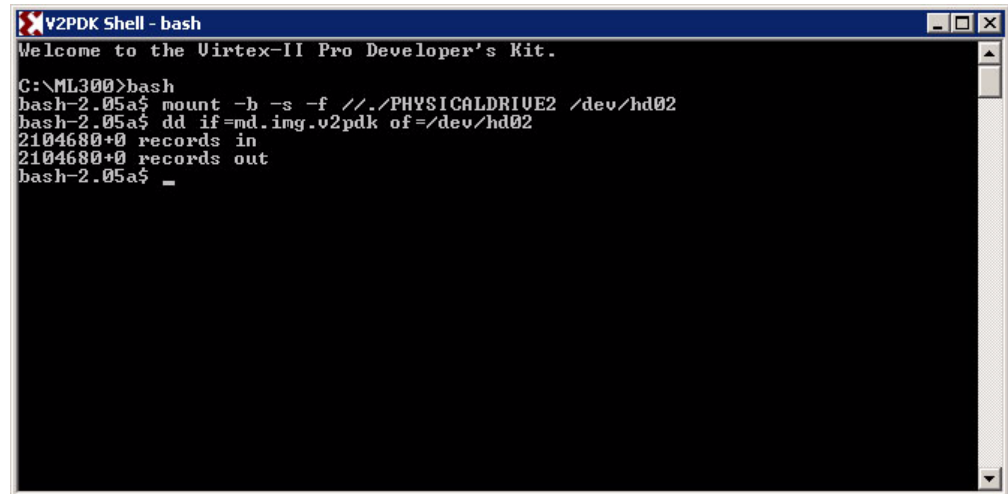


```
V2PDK Shell - bash
Welcome to the Virtex-II Pro Developer's Kit.
C:\ML300>bash
bash-2.05a$ mount -h -s -f ../PHYSICALDRIVE2 /dev/hd02
bash-2.05a$ dd if=md.img.v2pdk of=/dev/hd02
```

Figure 6: Write Disk Image to the Microdrive

- This imaging process takes 15 to 30 minutes.
- Do not remove the Microdrive or close the V2PDK shell during this time.
- Try not to do anything else in the background because the more you do the longer the imaging takes.

You will know the process is finished when you see the output and bash prompt shown in [Figure 7](#).



```

V2PDK Shell - bash
Welcome to the Virtex-II Pro Developer's Kit.
C:\ML300>bash
bash-2.05a$ mount -b -s -f ../PHYSICALDRIVE2 /dev/hd02
bash-2.05a$ dd if=md.img.v2pdk of=/dev/hd02
2104680+0 records in
2104680+0 records out
bash-2.05a$ _
  
```

Figure 7: View Process Completed Screen

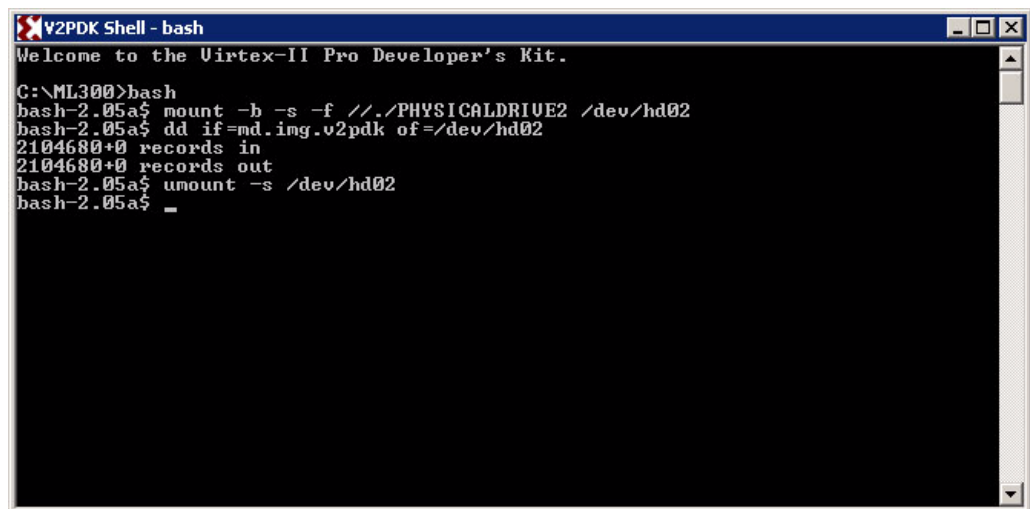
8. Unmount the Microdrive.

Note: Replace the x with the drive number you found in step 1.

```
bash-2.05a$ umount -s /dev/hd0x
```

The example in [Figure 8](#) shows:

```
umount -s /dev/hd02
```



```

V2PDK Shell - bash
Welcome to the Virtex-II Pro Developer's Kit.
C:\ML300>bash
bash-2.05a$ mount -b -s -f ../PHYSICALDRIVE2 /dev/hd02
bash-2.05a$ dd if=md.img.v2pdk of=/dev/hd02
2104680+0 records in
2104680+0 records out
bash-2.05a$ umount -s /dev/hd02
bash-2.05a$ _
  
```

Figure 8: Unmount the Microdrive

9. Removing the Microdrive.

Caution! Before removing the Microdrive from your CompactFlash adapter or PCMCIA slot, always:

1. First tell your operating system to eject the disk;
2. Then wait for the prompt telling you that it is safe to remove the device.

In Windows, you can do this in the Unplug or Eject Hardware window, or sometimes you can do this directly in Internet Explorer by right clicking on the **Removable Drive** and selecting **Eject**.

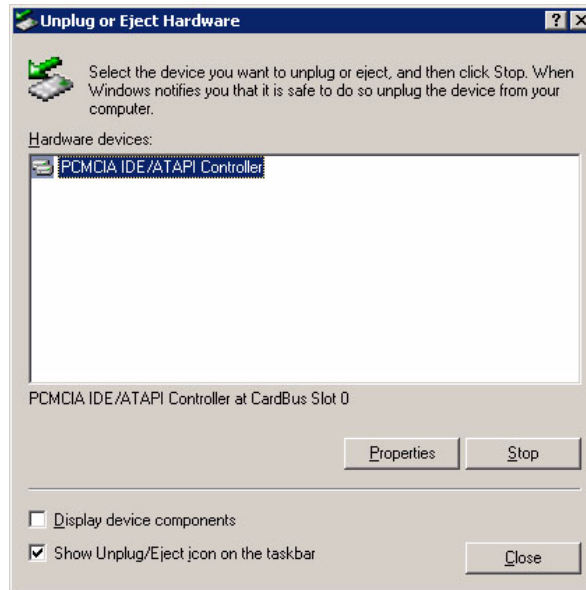


Figure 9: Unplug or Eject Hardware

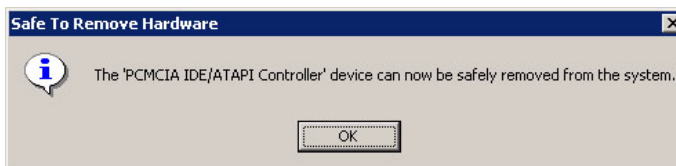


Figure 10: Removing the Microdrive

