ML501 CompactFlash
Re-imaging Procedure

May 2007
Overview

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- Imaging the CompactFlash
Procedure

- This procedure restores the ML501 32 MB CompactFlash to as-shipped condition
- Can be used to install future updated CompactFlash disk images
Caution

• This procedure will **erase** a hard drive
  – Make sure you are erasing the Compact Flash and **not** your PC’s hard drive
  – Drive numbers mentioned in this procedure sometimes change when your PC reboots - verify the drive number **each** time this procedure is used
  – These tools **do not check** to see if you are doing something wrong
  – If you do not make a backup copy of the CompactFlash card you are imaging, you will lose all the data on the CompactFlash

• Xilinx cannot take responsibility for lost data or damaged hard drives
Equipment Overview

- SiliconDrive™ 32 MB CompactFlash™
  - Comes preloaded with hardware and software demonstration systems for ML501
Equipment Overview

- Any CompactFlash Programmer that attaches to your PC - Some examples:
  - SanDisk ImageMate®
    - Provides a USB interface for programming CompactFlash cards
    - See [www.sandisk.com](http://www.sandisk.com) for more information
  - SanDisk PC Card adapter
    - Used in a laptop PCMCIA slot to program CompactFlash cards
Files needed

- Unzip these files to a temp directory (1)
  - ml501_cf_img.zip
  - cf_image_tools.zip
  - Optional - xcsc.zip
Image Checksum

• Optional - Run \texttt{xcsc.exe} on the image
  – These values (1) are for the \texttt{ml501_cf_090506.img}
  – The image CRC can be found on the download page for that specific image
Determining the Drive Number

- Right click My Computer and select Manage (1)
Determining the Drive Number

- Select **Storage -> Disk Management** (1)
- In this case, the CompactFlash’s Drive Number is “2” (2)
  - May have a different number on your system
  - This number may change after a reboot or hardware change, so always check
  - The partitioning (3) may look different (two instead of one)
Determining the Drive Number

- The Drive number for the CompactFlash can vary from PC to PC
  - The Drive number in this case is "0"
Mount the CompactFlash

- Start a windows command shell
- CD to the temp directory (1)
- Mount the CompactFlash card (2)
  ```
  mount -b -s -f //./PHYSICALDRIVE\x /dev/hd0\x
  ```
  Replace the x’s with the CompactFlash’s drive number
Image the CompactFlash

• Write the disk image to the CompactFlash card (1)
  
  `dd bs=256 if=ml501 Cf_090506.img of=/dev/hd0x`
  
  – Replace the `x` with the CompactFlash’s drive number

• This process can take up to 30 minutes
  – When finished it will list the records in and out (2)
Unmount the CompactFlash

- Unmount the CompactFlash card (1)
  
  `umount -s /dev/hd0x`
  
  - Replace the x with the CompactFlash’s drive number
Drive Contents

- The CompactFlash should look like this after Imaging (1)
  - Note: You may have to eject and reinsert the CompactFlash to see this
  - Review "Remove the CompactFlash" slide before ejecting the disk

- The Disk Properties will show 30.9 MB space on the disk (2)
Drive Partitions

- After imaging, one partition will appear on the CompactFlash (1)
Remove the CompactFlash

- To insure data integrity, always Eject the Compact Flash prior to removing it from the adapter.
- Right-click on the CompactFlash Drive and select Eject (1).
- Remove the Compact Flash card.
Remove the CompactFlash

- When using a PC Card Adapter, the card must be properly stopped before it is removed from your PC
  - Click on the Unplug or Eject Hardware icon in your system tray (1)
  - Stop the PCMCIA controller (2)
CompactFlash IDs

- Use a PC Card Adapter
- Right click on the CF disk and select Properties (1)
- This disk is a SDCFB-512 (2)
Documentation

• ML501
  – ML501 Overview
    http://www.xilinx.com/ml501
  – ML501 Getting Started Tutorial – UG228
  – ML501 Schematics