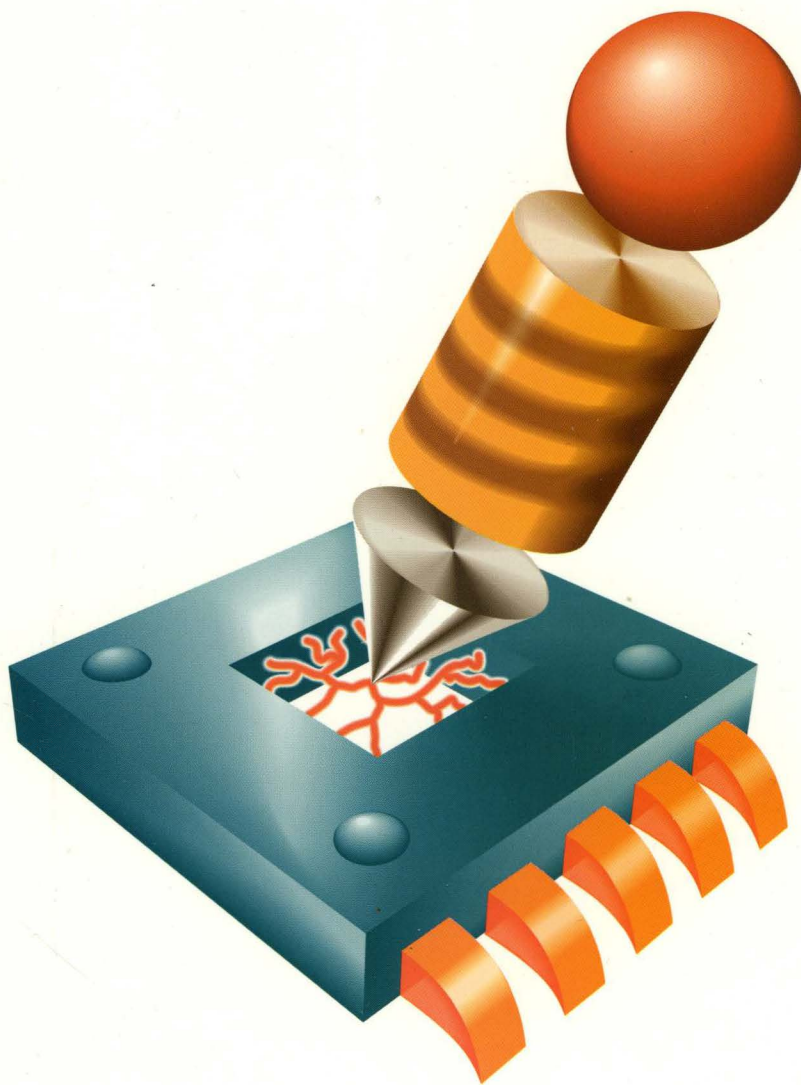


GETTING STARTED

INSTALLATION GUIDE



X_S **A**_T **C**_E **T**TM_P

Getting Started & Installation Guide

Getting Started

Installing PC Products

*Installing Workstation
Products*

*Using Xilinx Online
Documentation*

Disk Space Management

*System Requirements for
Xilinx Software*

Accessing Your CD-ROM

*Setting Up the Xilinx
Environment*

Using DOS Products

Troubleshooting

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Preface

About This Manual

This manual outlines the steps to follow to get started with the Xilinx software. It also covers installation and authorization of the Xilinx software and online documentation.

Manual Contents

This manual covers the following topics.

- Chapter 1, “Getting Started,” outlines the tasks to follow to get started with the Xilinx software.
- Chapter 2, “Installing PC Products,” covers installation and authorization of Xilinx software on a personal computer.
- Chapter 3, “Installing Workstation Products,” covers installation and authorization of Xilinx software on a workstation.
- Chapter 4, “Installing Xilinx Online Documentation,” describes how to install a reader and a set of documents on a personal computer and on a workstation. It also provides a descriptive list of Xilinx manuals.
- Chapter 5, “Disk Space Management,” describes how to minimize disk space use.
- Appendix A, “System Requirements for Xilinx Software,” lists the system requirements for using the Setup program and the Xilinx software.

- Appendix B, "Accessing Your CD-ROM," describes how to set up your PC to execute software, tutorials, and online documentation directly from a CD-ROM and how to access a workstation CD-ROM using PC-NFS.
- Appendix C, "Setting Up the Xilinx Environment," explains how to manually update your configuration file.
- Appendix D, "Using DOS Products," explains how to copy Xilinx DOS-based software on diskettes, install from diskettes, authorize your products from DOS and execute the DOS-based *XACTstep* products in an MS-DOS shell from Windows.
- Appendix E, "Troubleshooting," lists solutions to possible errors you might encounter when running the installation program.

Conventions

The following conventions are used in this manual's syntactical statements:

Courier font regular	System messages or program files appear in regular Courier font.
Courier font bold	Literal commands that you must enter in syntax statements are in bold Courier font.
<i>italic font</i>	Variables that you replace in syntax statements are in italic font.
[]	Square brackets denote optional items or parameters. However, in bus specifications, such as bus [7:0], they are required.
{ }	Braces enclose a list of items from which you must choose one or more.
.	A vertical ellipsis indicates material that has been omitted.
...	A horizontal ellipsis indicates that the preceding can be repeated one or more times.
	A vertical bar separates items in a list of choices.
↵	This symbol denotes a carriage return.

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Getting Started & Installation Guide

Getting Started

Getting Started

This manual explains how to install Xilinx software products and how to configure your system ready for use with the XACTstep software.

Guidelines

The following is a summary of the steps to follow for getting ready to use your software.

- *Fill out the enclosed registration card.*
Fax or mail Xilinx the card to receive future updates and product information.
- *Read the release documents.*
 - Verify the contents of the box against the item list on page 1 of the release notes.
 - Read about new features and important software issues.
- *Install your XACTstep software.*

Follow the instructions for your platform in this guide to install your software.

Before installing software, you must first check that your system meets the requirements outlined in the “System Requirements for Xilinx Software” appendix, then continue with the appropriate chapter for your type of installation: “Installing PC Products” or “Installing Workstation Products.”

You can install a complete software package or an individual product. In either case you can choose to install the selected

product in its entirety using the Quick Install option, or partially using the Custom Install option.

If you have a Windows PC and you do not want to install the software, you can execute it directly from the CD-ROM, as explained in the "Using Your CD-ROM" appendix.

- *Install online documentation.*

Starting with the XACTstep 5.2/6.0 release, you can access Xilinx documentation online on a PC running Windows or on a Sun workstation*. In addition, interactive tutorials and context-sensitive help are available for all Windows-based programs.

Context-sensitive help is available from the Help menu of each program. It is also available from selection dialog boxes that include a Help button. Refer to the manual for each of these programs for more information.

To use online documentation, you must first install the Adobe Acrobat reader. If you have a PC running Windows, install the reader at the time you install the software from the Xilinx Setup program. If you have a Sun 4 workstation, refer to the "Using Xilinx Online Documentation" chapter, in this manual.

- *License your XACTstep software.*

After installing your software, you must authorize it.

- To authorize software on a PC, refer to the "Using Xilinx Security" section in this manual.
- To authorize your software on a workstation, refer to the "License Management for Workstations" section in this manual.

- *Address your questions and comments as follows.*

United States and Canada:

Technical HOTLINE	(800) 255-7778
Customer Service	(800) 624-4782

In Europe, Japan, Asia, and other areas, contact your local distributor.

*. Other platforms will be supported in later releases.

Getting Started & Installation Guide

Installing PC Products

Installing PC Products

This chapter explains how to install Xilinx Windows and DOS programs on a personal computer. The installation includes installing WIN32S, starting the Setup program to load the Xilinx software to your PC, and authorizing the software.

Note: To execute a DOS program from a DOS shell in Windows, refer to the “Using DOS Programs” appendix.

Installation Procedure

Installing Xilinx programs in the Windows environment is a two-step process. You must first install WIN32S before you can start the Setup program.

Installing WIN32S

Xilinx programs require the installation of WIN32S Version 1.25.42.0.

If you do not have WIN32S installed on your system or are not sure if it is installed, follow this procedure:

1. If Windows is not already running, invoke it by typing **win**.↵.
2. Insert the CD-ROM into a drive and determine the source drive letter. This installation guide assumes d: is the CD-ROM drive. If it is different on your system, substitute accordingly for the following instructions.
3. From the Program Manager, select **File** → **Run** and enter **d:\win32s\disk1\setup.exe**.↵.
4. Follow the instructions on your screen.

Note: You should also install the Freecell program from the Setup program to test the WIN32S installation. Then, test the Freecell

program by clicking on the Freecell icon in the Win32 Applications group. If Freecell does not execute, you must re-install WIN32S. However, before re-installing WIN32S you must first de-install it as explained in the "De-installing WIN32S" section.

5. Continue with the instructions in the section, "Starting the Xilinx Setup Program."

De-installing WIN32S

This section explains how to remove WIN32S from your installation. You should remove this program any time you need to re-install it.

1. Delete the following files from the `\windows\system` directory:
 - `win32s16.dll`
 - `w32sys.dll`
 - `winmm16.dll`
 - `win32s.ini`
2. In addition, delete all the files that are included in the `\windows\system\win32s` directory.
3. Edit the [boot description] section in your `\windows\system.ini` file by removing the `winmm16.dll` entry of the driver list, as follows:

For example, change

```
drivers=mmsystem.dll msmixmgr.dll winmm16.dll  
to
```

```
drivers=mmsystem.dll msmixmgr.dll
```

4. Delete the following line under the [386Enh] section:

```
device=c:\windows\system\win32s\w32s.386
```

Starting the Xilinx Setup Program

Follow these steps to install the Xilinx software.

Note: To access the CD-ROM drive located on a Sun workstation or to run Xilinx PC software directly from your CD-ROM without installing on your hard disk drive, see the "Accessing Your CD-ROM" appendix for instructions. However, to access the tutorials

or the online documentation from the CD-ROM, you must still use the Xilinx Setup program to select these options. The installation program will install required software, set up your path, and create program icons.

1. Check the system requirements defined in the "System Requirements for Xilinx Software" appendix.
2. If Windows is not already running, invoke it by typing **win**.
3. Insert the CD-ROM into a drive and determine the source drive letter. This installation guide assumes d: is the CD-ROM drive. If it is different on your system, substitute accordingly for the following instructions.
4. From the Program Manager, select **File** → **Run** and enter **d:\setup.exe**.
5. Follow the instructions on your screen.

By default, Setup copies the XACTstep Development System software to a directory called \XACT whether it exists or not. If existing software is already installed in the \XACT directory, Setup will overwrite the old software with the new software unless you change the name of the installation directory to be used by the installation program.

If you are installing Xilinx PRO Series tools, by default, Setup copies the Viewlogic PRO Series software to a directory called \PROSER. If existing software is already installed in the \PROSER directory, you cannot install in the directory unless you turn on the Force File Overwrite option from the Settings menu.

Note: If you have enough space, Xilinx recommends that you install the XACTstep software to a new directory. This procedure enables you to validate the new installation before removing the old software.

6. Setup will update your AUTOEXEC.BAT file automatically. If it cannot update it, or if you are installing on a Novell network, refer to the "Setting Up the Xilinx Environment" appendix for information on how to update your configuration file manually.
7. Attach the required Xilinx key as described in the next section.

Note: If the key is installed on the same port as an external CD-ROM drive, attach the drive to the port and then the key to the drive.

Installing Online Documents and Tutorials

The current release of XACTstep software includes online tutorials and online documentation. If you are installing Windows software with the Quick installation option, the tutorials and online documents included in the package that you selected are automatically installed on your hard disk drive.

- To control whether the documents are installed on your hard disk drive, select the Custom installation option.

To see the list of available documents for each product, select a package from the Package list-box on the Install screen. Then, select one of the following products: DS-502, DS-550, or a Viewlogic product.

The documents and tutorials available for each product are listed in the Options list box along with the other product options.

- To control whether the documents are installed on your hard disk or accessed from the CD-ROM, use the Individual Products option.

If you want to select the tutorials, the online documents, or both, use the appropriate options in the Products list box.

Tutorials:

- **Run Tutorial from CD** runs the online tutorials from the CD-ROM.
- **Install Tutorial Locally** copies all online executables and data files onto your hard disk and runs the tutorials from the PC.

Online Documents:

- **Read Online Doc from CD, Read Apps Doc from CD, and Read ProSer Doc from CD** run the online documentation from the CD-ROM.
- **Local Install Online Doc, Install Apps Doc Locally, and Local Install ProSer Doc** copy the documents on your hard disk.

Note: To save disk space, Xilinx recommends that you run the tutorials and documents from the CD.

8. If you selected one of the online documentation options, you are asked at the end of the software installation if you want to install the Adobe Acrobat reader.
9. You can either choose to install the reader or cancel the operation.

If you do not install the Adobe Acrobat Reader, you must have it already installed on your system in order to view the online documents. For more details, refer to the “Using Xilinx Online Documentation” chapter.

Using Xilinx Security

When running software on a personal computer, you are required to install a Xilinx key to run specific products.

New Customers

If you are a new customer, you are provided with a key that includes 50 evaluation runs of the software. *You must call Xilinx or your distributor to obtain a password to enable your key to authorize the software permanently for a given product or package. Refer to the “Authorizing a Programmable Key” section for more information.*

The Xilinx key only comes with core and package products, such as DS-502, VLS-STD, and VLS-EXT. If you have a product that comes without a key, such as X-BLOX (DS-380), Xilinx ABEL (DS-371), PROcapture (DS-390), or PROsim (DS-290), call Xilinx Customer Service to obtain a key.

Existing Customers

If you received a product update (SC-502 products), the C key is already authorized and you do not need to call Xilinx.

Authorizing a Programmable Key

To authorize your software, follow these instructions.

Note: You can authorize your software from Windows or from DOS. To authorize software from DOS, refer to the "Using DOS Products" appendix.

1. Call Xilinx Customer Service to obtain the password for your key. You will be asked to furnish the key serial number and the names of the products to be authorized.

To obtain the authorization codes, contact Xilinx Customer Service from 8:00 a.m. to 5:00 p.m. (Pacific Standard time).

United States and Canada	1-800-624-4782
Europe	44-1-932-349401
Japan	813-3297-9191
Southeast Asia/ All Other Countries	852-2410-2739
Facsimile Transmission	1-408-559-0115

International customers may also contact their local sales distributor or sales representative.

2. Connect the key to a parallel port of your PC.
3. Double-click on the **Software Authorization Utility** icon shown in Figure 2-1.



Figure 2-1 Software Authorization Utility Icon

The Software Authorization dialog box shown in Figure 2-2 is displayed.

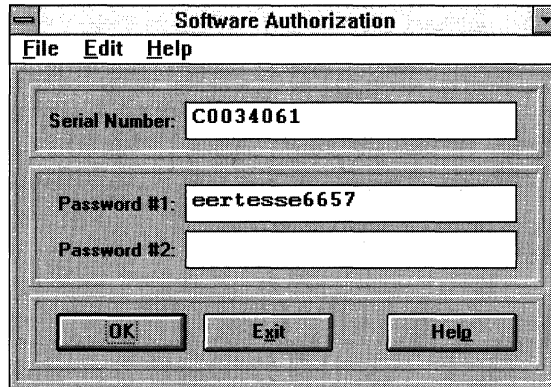


Figure 2-2 Software Authorization Dialog Box

4. Locate the serial number of the key on its case.
5. Enter the serial number in the Serial Number box and the password in the Password #1 box of the Software Authorization Utility dialog box.
6. Click on the **OK** button to submit the password to the system.

The following screen is displayed.

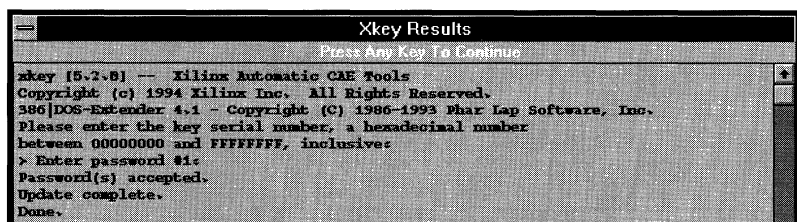


Figure 2-3 Authorizing Your Software

Note: If you have purchased the Xilinx version of PRO Series, ensure you are not using a Viewlogic key. The Xilinx C key is the only key that should be attached.

7. Choose the **Show Key Authorization** option from the File menu to check the capabilities of your key.

Figure 2-4 shows a typical authorization screen that is displayed if you enabled Viewlogic Extended.

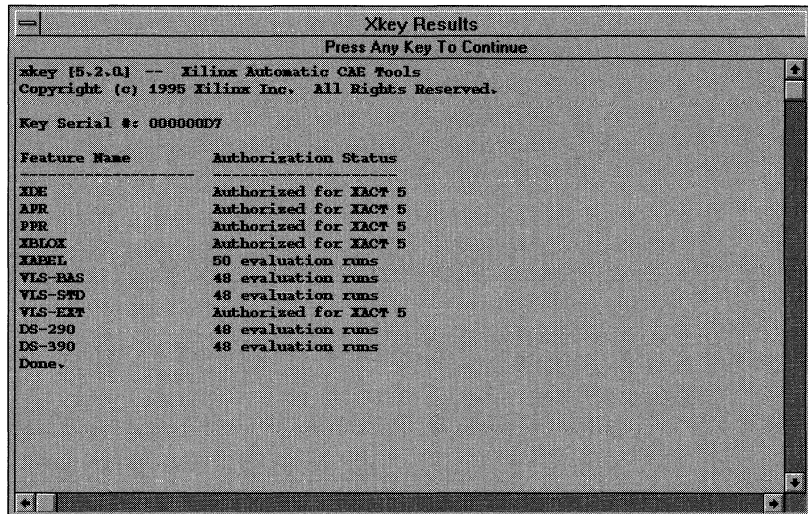


Figure 2-4 Displaying Key Authorizations

8. Refer to Table 2-1 to verify that the licensed components of your products are authorized.

The table shows the mapping between products and the licensed components that are displayed on your screen when you select the Show Key Authorization option.

Table 2-1 Product Feature Mapping Chart

Product	Licensed Component
DS-502	XDE, APR, PPR
DS-371 (Xilinx ABEL)	XABEL
DS-391	None
DS-35	None
DS-OR-STD	XDE, APR, PPR, XBLOX
DS-380 (X-BLOX)	XBLOX
Standard Packages (DS-3PA-STD, DS-OR-STD, or DS-VL-STD)	XDE, APR, PPR, X-BLOX
Advanced Packages* (DS-3PA-ADV or DS-VL-ADV)	XDE, APR, PPR, X-BLOX
Viewlogic Stand-alone Base DS-VLS-BAS (PROcapture and PROsim)	VLS-BAS
Viewlogic Stand-alone Standard DS-VLS-STD (PROcapture and PROsim)	XDE, APR, PPR, XBLOX, VLS-STD
Viewlogic Stand-alone Extended DS-VLS-EXT (PROcapture, PROsim, and PROsynthesis)	XDE, APR, PPR, XBLOX, VLS-EXT
Viewlogic Stand-alone Advanced DS-VLS-ADV (PROcapture, PROsim, and PROsynthesis)	XDE, APR, PPR, XBLOX, VLS-STD
DS-290 PROsim	DS-290
DS-390 PROcapture	DS-390

*. The Foundry components included in Advanced packages use a separate license program. Refer to your Foundry documentation for information.

Copying Key Information from a File

You can store information for your key in a file and open the information from the Software Authorization dialog box.

1. Enter the serial number and password information in a file.
2. Select the **Open Key Information** option from the File menu and specify the name of the file in which you stored the key information.

- The first line of the file should be the key serial number followed by a carriage return.
- The second line of the file should be the Password followed by a carriage return.
- The third line of the file should be a carriage return (no text) if there is no second password.

Example of *keyfile.dat* file:

```
C1234567  
sd579fgdi6f7fk1kk75h28
```

3. Click on the **OK** button to process the key information.
4. Verify that your key has been authorized for the products you installed by selecting the **Show Key Authorization** option from the File menu. Information similar to the one in Figure 2-4 is displayed.

Verifying Programmable Key Capabilities

Because all keys come with evaluation runs that enable all software to run immediately without authorization, you can begin to use the software without waiting for the authorization password.

To verify the capabilities of your key, perform the following steps:

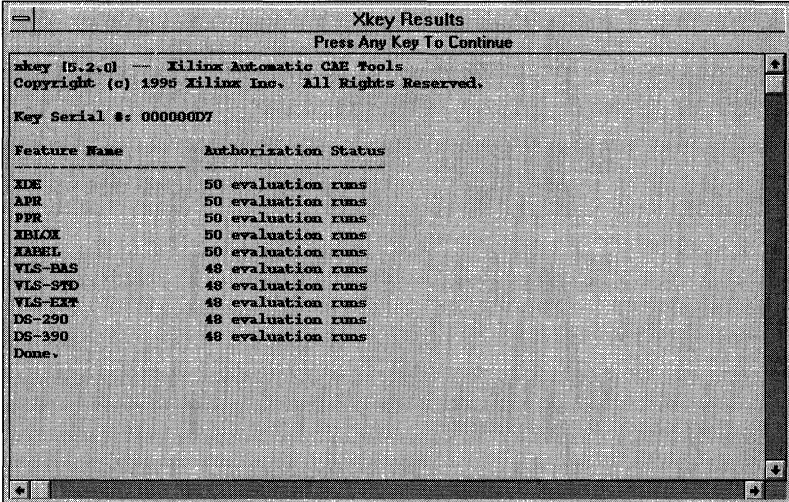
1. Attach the key to a parallel port of your personal computer.
2. Click on the **Software Authorization Utility** icon to display the software authorization screen.



Figure 2-5 Software Authorization Utility Icon

3. Select the **Show Key Authorization** option from the File menu of the Software Authorization program shown in Figure 2-2.

If you are a new customer using a key that has not been authorized, this command generates a screen with the information displayed in Figure 2-6.



```

Xkey Results
Press Any Key To Continue

xkey [5.2.0] --- Xilinx Automatic CAE Tools
Copyright (c) 1995 Xilinx Inc. All Rights Reserved.

Key Serial #: 00000007

Feature Name      Authorization Status
-----
XDE               50 evaluation runs
APR               50 evaluation runs
PPR               50 evaluation runs
XBLCM             50 evaluation runs
XABEL            50 evaluation runs
VLS-BAS           48 evaluation runs
VLS-STD           48 evaluation runs
VLS-EXT           48 evaluation runs
DS-290            48 evaluation runs
DS-390            48 evaluation runs
Done.

```

Figure 2-6 Non-Authorized Key

Note: The number of evaluation runs reflects the number of free software evaluation sessions remaining for each product.

If you are an existing customer using a previously authorized key or if you have just authorized your software, the list of licensed products is displayed with the corresponding authorizations. For example, if you have a key authorized for the VLS Extended package, the following text is displayed:

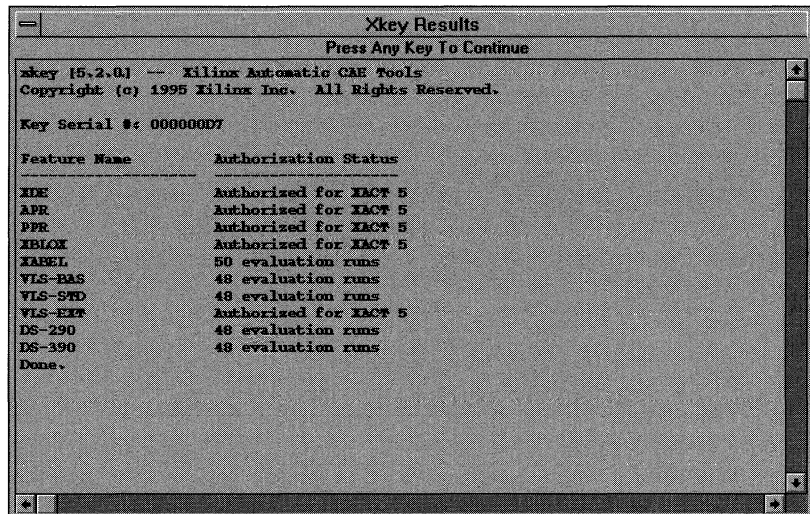


Figure 2-7 Key Authorized for VLS-EXT

Note:

The number of evaluation runs reflects the number of free software evaluation sessions remaining for each product. The number is not updated when you install new software.

The number of software evaluation runs for all Viewlogic products decrements at the same rate. For example, if you use one evaluation run for the Viewlogic DS-390 product, the number of evaluation runs for each of the Viewlogic products listed (VLS-BAS, VLS-STD, VLS-EXT, and DS-290) decreases also.

Files for Windows Installations

This section lists the files that the XACT and PRO Series programs install in the /windows and /windows/system directories. It also lists the files that are installed to execute the tutorials. The files must exist in the directories indicated below for proper software operation.

Table 2-2 Installation Files for Windows-based Software

Proser or Prosyn Program		XACT Program	Tutorials
\windows	\windows\system	\windows\system	\windows\asym\runtime
_default.pif bprogen.pif bvhdl.pif bvhdlw.pif pinsave.pif sysblock.pif syscmd.pif timerpt.pif xalttmp.pif xemake.pif	cstext.vbx gauge.vbx mh3b200.vbx mhgchk.vbx mhgcmb.vbx mhgdir.vbx mhgdr1.vbx mhgfil.vbx mhgfrm.vbx mhglbl.vbx mhgmul.vbx mhgopt.vbx mhin200.vbx mhinint.vbx mhmq200.vbx mhrun400.dll mhsl200.vbx olecli.dll sbc.vbx threed.vbx toolhelp.dll vbrun300.dll vshare.386	cmdialog.vbx ctl3d.dll ctl3d32.dll daikon.386 threed.vbx vbrun300.dll	mtb30anm.sbk mtb30bas.dll mtb30bmp.dll mtb30cmp.dll mtb30flt.dll mtb30lnl.dll mtb30mm.dll mtb30mm.ini mtb30net.exe mtb30run.exe mtb30utl.dll pcdxbmp.dll photo.dll tload.exe pcdlib.dll

Getting Started & Installation Guide

*Installing Workstation
Products*

Installing Workstation Products

This chapter covers installation of XACTstep software on a UNIX workstation. Use the Install program for this type of installation.

Starting the Installation Program

To install software on a Sun4 or HP700 workstation, you can execute the Install program from a local CD-ROM drive. To install on an RS6000 or DEC/Alpha workstation, enter the Install command at the command line as explained in the “Installing on an RS6000 or DEC/Alpha” section, in this chapter. To install Verilog software, refer to the “Cadence Verilog-XL” chapter in the *XACTstep Version 5.2/6.0 Core Tools* release document.

Accessing a Local CD-ROM Drive

Follow these instructions to access a local CD-ROM drive for installing your software.

Note: On a Sun workstation, you can access Xilinx online documentation. You can install the documentation from the Install program itself. To install the Adobe Acrobat Reader Version 1.0, refer to the “Using Xilinx Online Documentation” chapter.

1. Check the system requirements defined in the “System Requirements for Xilinx Software” appendix.
2. Insert the CD-ROM into the drive.
3. Start a window manager (OpenWindows or X-Windows).
4. Execute the platform-specific commands as indicated following.

Note: Workstation users must have root privileges to use mount commands (# = root prompt, % = user prompt). Directories and

device names can vary; therefore, check these names with your system administrator.

- On a Sun 4, enter these commands to mount the CD-ROM if it has not already been mounted:

```
# mkdir /cdrom_dir
```

```
# mount -t hsfs -o ro /dev/sr0 /cdrom_dir
```

Type the following to start the Install program:

```
% /cdrom_dir/install
```

- On an HP700, enter these commands to mount the CD-ROM if it has not already been mounted:

```
# mkdir /cdrom_dir
```

```
# mount /dev/dsk/3s0 /cdrom_dir
```

Type the following to start the Install program:

```
% /cdrom_dir/INSTALL.\;1
```

where *cdrom_dir* is the pathname to the CD-ROM device.

5. Follow the instructions on your screen.

By default, Install copies the software to the /xact directory whether it exists or not. If you have existing Xilinx software installed in the /xact directory, Install overwrites the software with the new software.

If you have enough space, Xilinx recommends that you install XACTstep Version 5.2 to a new directory. This procedure enables you to validate the new installation before removing the old software.

Note: If you are a Mentor Graphics user and do not have Mentor Graphics Version 8.4 installed, do not install the DS-344 product. If you are a new customer and do not have a previous installation of the Xilinx Mentor Graphics Interface (DS-344), you can install the new interface anywhere. If you have an existing DS-344 installation, you *must* overwrite the existing installation with the new interface.

6. Refer to the "Setting Up the Xilinx Environment" appendix for information on how to update your configuration file with the proper environment variables.

Before running the software, you must install and start the network license manager. If the license manager is not running, the protected applications try to start it automatically.

7. If you installed a product that requires a license, authorize your software using the information in the “License Management for Workstations” section in this chapter. Table 3-1 in the “Adding New Products” section lists the products that require a license.

Installing on an RS6000 or DEC/Alpha

This section covers installation on RS6000 and DEC/Alpha workstations using a command you enter from the command line to initiate an installation script.

Initializing the Install Script

The Install program for the RS6000 and DEC/Alpha workstations operates with *optional* command line arguments.

Use the following syntax from the source directory command line.

On an RS6000:

```
/cdrom_dir/install -source source_dir -target target_dir
```

On a DEC/Alpha:

```
/cdrom_dir/INSTALL.;1 -source source_dir -target target_dir
```

where *cdrom_dir* is the pathname to the cdrom device.

You can overwrite the source directory with the `-source source_dir` argument. If you do not specify this argument, Install retrieves the source directory from the Install command located on the CD-ROM.

If you did not specify the target directory from the command line with `-target target_dir`, the Install program prompts you to enter the target name. Install also creates a target directory if you did not create one before installing a product.

The source directory should have an install file and a subdirectory for either the RS6000 platform (rs6) or for the alpha platform (da1), or for both platforms. The Install script exits if the platform is not either of these platforms.

Each product is stored as a tar file in these subdirectories. The source directory should include the following subdirectories and tar files:

```
Source Area/install
./rs6
./rs6/ds391
./rs6/ds380
./rs6/ds401
./rs6/ds502
./rs6/ds550
./rs6/ds500
./da1
./da1/ds391
./da1/ds380
./da1/ds401
./da1/ds502
./da1/ds500
```

If you want to store more information such as documentation in the platform subdirectory, add a 'products' file that lists the products included in the platform subdirectory. If the products file is missing, type the ls command on the platform subdirectory to identify which products are present.

Installing Products

After the initial program setup, the following menu is displayed:

```
Enter the number corresponding to one of the
following options:
```

1. Install a product
2. Set a different target
3. Exit the Install program

- Selection 1 displays a list of products as follows :

```
Please select a product to install. To select a
product, enter the option number.
```

1. ds391
2. ds380
3. ds401
4. ds502
5. ds550 (RS6000 workstations only)
6. ds500

After you select a product, the program checks that the disk for the target is big enough and then installs the product. After installing a product, Install goes back to the main menu. You can then choose to install another product.

- Selection 2 allows you to set a new target installation path and start again with the main menu without exiting the program. This feature enables you to install to a larger target disk when you have selected a disk that is too small; it also allows you to install different products in different directories.
- Selection 3 ends the current install session.

After installing the products, authorize your software, referring to the "License Management for Workstations" section, following.

License Management for Workstations

Workstations do not require a programmable key. Instead, you may need to contact your Xilinx customer service representative to obtain authorization codes for your new Xilinx products.

To use XACTstep Version 5.2 software, you must have the following:

- Highland License Manager, Version 2.4
- Xilinx license.dat file
- Appropriate authorization codes for your new Xilinx products

The Highland License Manager and the license.dat file are included on the media shipped to you by Xilinx and are copied with the software in your installation directory by the Install program.

Adding New Products

If you are adding new products, you must call Xilinx to obtain the authorization codes for the licensed components you purchased. The components listed in Table 3-1 are the Xilinx licensed programs that require an authorization code.

Table 3-1 Licensed Components To Be Authorized

Product	Licensed Component
Standard Package	XDE, APR, PPR, XBLOX
Advanced Package	XDE, APR, PPR, XBLOX
DS-380 (X-BLOX)	XBLOX
DS-371 (Xilinx ABEL)	XABEL
Mentor Graphics Package or DS-344	XNF2EDIF

To enable a new installation, you must update your license.dat file with the authorization codes and start the Highland license server.

To enable an existing installation, you must update the license file, shut down the license server, and then restart the license server to run the new version of the Highland software.

Adding a Product Update

If you are an existing XACT customer, your license.dat file is already enabled for XACTstep Version 5.2. In this case, you do not need to call Xilinx and edit your license.dat file, unless you are adding new products. New products have a "DS" prefix. Updates have an "SC" prefix.

Warning: If this installation is only an update, and no new features are being added, you must shut down and restart the license server to run the new version of the Highland software, Version 2.4.

Preparing the License.dat File

If you install software from a CD-ROM, you must edit the file manually to add the information received from Xilinx.

The authorization file is in *full_path/xact_dir/license/license.dat*. The file includes comments that explain how to add the specific Xilinx authorization codes.

1. Contact Xilinx Customer Service Monday through Friday, from 8:00 a.m. to 5:00 p.m. Pacific Time to obtain the authorization codes. International customers may also contact their local sales distributor or sales representative.

United States and Canada	1-800-624-4782
Europe	44-1-932-349401
Japan	813-3297-9191
Southeast Asia/All Other Countries	852-2410-2739
Facsimile Transmission	1-408-559-0115

2. Provide the host name and host identification of the computer that will be your license server as well as the product name and serial number from your registration card.

Note: Save the license agreement card so that you will have the product name and serial number available in the future. If you entered your serial number during an installation, you can retrieve it by executing the following command:

```
full_path/xact_dir/license/serial.csh␣
```

You can obtain the host name and host id by logging into the machine designated as your license server and by executing the following:

```
full_path/xact_dir/bin/cpu_type/xlmcon hostname␣
```

```
full_path/xact_dir/bin/cpu_type/xlmcon hostid␣
```

where *full_path* is a user-defined directory, *xact_dir* is the installation directory, and *cpu_type* is alpha, hppa, rs6000, or sparc.

The information just described must be obtained for the machine that is to be the license server. For example, if you wish an HP 9000/7xx machine to be the license server for an environment containing software running on Sun and HP 9000 systems, you would perform those commands on the HP server.

If your system or network is already running the Highland License Manager for another Xilinx product, you can also find the appropriate hostname and hostid on the "SERVER" line of your current license.dat file. You must use the same server information if you plan to add new products to your existing server.

Understanding License Codes

Your Xilinx Customer Service Representative will fax you a file that includes information similar to the following. This information enables you to authorize platform-dependent and platform-independent licenses.

```
SERVER triton 55090a70 2100
DAEMON XXACTD /usr/etc/XXACTD
#
FEATURE      XDE XXACTD 1.000 18-JUL-1995 1 C011E54C "XSJ"
FEATURE XDE-SUN4 XXACTD 1.000 18-JUL-95 1 C011E54C "XSJ"
FEATURE      APR XXACTD 1.000 18-JUL-1995 1 60B642A8 "XSJ"
FEATURE APR-SUN4 XXACTD 1.000 18-JUL-95 1 60B642A8 "XSJ"
FEATURE      PPR XXACTD 1.000 18-JUL-1995 1 169ECFF8 "XSJ"
FEATURE PPR-SUN4 XXACTD 1.000 18-JUL-95 1 169ECFF8 "XSJ"
FEATURE      XBLOX XXACTD 1.000 18-JUL-1995 1 58825F70 "XSJ"
FEATURE XBLOX-SUN4 XXACTD 1.000 18-JUL-95 1 58825F70 "XSJ"
##
```

While platform-independent licenses do not include a platform suffix, platform-specific licenses consist of a platform-specific suffix following the product name in the FEATURE line of the license.dat file.

To authorize all platforms, enter the license string without the platform name. To authorize a specific platform, enter the license string for your platform.

```
FEATURE XDE-SUN4 XXACTD 1.000 18-SEP-95 1 C011E54C "XSJ"
```

In this example, XDE is authorized on a SUN4 only.

Adding Authorization Codes

Edit the license.dat file located in the license subdirectory with the authorization codes received from Xilinx Customer Service.

Note: If your system or network is already running the Highland License Manager for another Xilinx product, you only need to add the new Xilinx license information to the existing license file and restart the license server. In this case, copy only the *new* FEATURE lines to the end of the existing Xilinx license file.

1. Add your authorization data as given to you by Xilinx at the end of the file, observing the following rules.
 - Entries in the license file must have exactly one line per feature.
 - All authorization codes must be entered correctly and in correct case.
 - The SERVER, DAEMON, and FEATURE keywords must begin in the first column of the line.
2. Use the template provided at the end of the license.dat file. The template shows the case requirements for the various fields.

Failure to follow those rules will cause the license manager to refuse permission to run the software.

To minimize the risk of typographical errors while entering the license data, customers in the U.S. who can receive electronic mail over the Internet can request that their license be e-mailed to them.

Starting the License Server

Once the license.dat file is prepared, start the network license manager.

Warning: If you have previously installed Xilinx software and are running the 1.5 or 2.1 version of the Highland License Manager, or have added new entries into your license file, you must shut down and restart the license manager. Be sure to run the new version, Version 2.4, when you restart the Highland License Manager. If this installation is only an update, and no new features are being added, you must still restart the license server to run the new version of the Highland software.

Start the license manager using the following command

```
full_path/xact_dir/bin/cpu_type/xlmasu.↓
```

The `xlmasu` program reads the `full_path/xact_dir/license/license.dat` file and sends to the license server machine a command to start the license manager. You can run `xlmasu` on the license server machine or on any machine that can run remote commands on the server machine.

If you make any changes to the `license.dat` file after starting the license manager, you will have to stop and restart the license manager to enable the changes to take effect.

Any time you need to restart the license manager, you must first run the `xlmdown` program to stop the active license manager. Then, run `xlmasu` to restart the license manager.

Existing Highland License Manager Users

If your system is already running the Highland License Manager for a non-Xilinx product, you should run a separate `Lmgrd` server for Xilinx programs, using a separate license file. The two servers must use different socket numbers. The socket number is the last entry on the `SERVER` line. The default Xilinx socket number is 2100. Refer to the example `license.dat` file shown in the “Understanding License Codes” section for information on how to define the socket number. You can change the socket number or the host name without obtaining new authorization codes: only the `hostid` is encoded.

Note: Xilinx strongly recommends that you use a separate license file exclusively for Xilinx licenses and that you use the auto-startup feature. This feature is enabled by default and allows your licensed programs to automatically start the license server if the Highland License Manager is not running. To disable the auto-startup feature, refer to the `$XACT/license/README` file.

Checking the Installation

Verify your installation by checking that the appropriate files are installed and the required programs are running.

1. Check that your installation directory includes the required programs and directories listed in the "Programs and Directories" section at the end of this chapter.
2. Ensure that the required authorization codes are in the license file.
3. The license server communicates with Xilinx-controlled programs using TCP/IP. If you are using a stand-alone Sun workstation, the network might not be running the TCP/IP protocol.

Using the `ps` command at the end of this subsection, check that TCP/IP is available on your system by verifying that the license server and any node from which the Xilinx software runs are running `inetd`.

If TCP/IP is not running, ask your system administrator to start the protocol for you.

4. The Xilinx graphical programs are X-Windows based.

Using the `ps` command at the end of this subsection, check that the X-server used by the Xilinx graphical programs is running on the node where the programs are to be viewed:

- On Sun, the server is usually called "xnews," "X," or "Xsun."
 - On HP-PA and DEC Alpha OSF/1, it is usually "X."
5. Ensure that the license program and the Xilinx license daemon are running on the license server node. The license program is called "lmgrd," and the daemon is called "XXACTD." Normally, these servers are automatically started by the first execution of a licensed program such as APR, PPR, or XDE.

To check for these required programs, use the `ps` command and scan the output for the required programs, as in the following examples:

- In C shell, enter these commands:

```
ps axw | grep X | grep -v grep
```

- In Bourne shell, enter these commands:

```
ps -eaf | grep inetd | grep -v grep
```

Checking the License Server

The programs `xlmcon` and `xlmlog` are useful for finding problems with the license server. They are installed in the `full_path/xact_dir \ /bin/cpu_type` directory.

1. To check whether the licenses for your programs are enabled, type the following:

```
xlmcon quick -a
```

The `xlmcon` interactive program reports information about the Highland License Manager and `license.dat` file.

You can also invoke the `xlmcon` program by entering the following:

```
xlmcon
```

You can use any of the following commands at the `xlmcon>` prompt:

- `hostname` reports the current name of the node as understood by the Highland License Manager.
- `hostid` reports the CPU ID (host identification) of the current node as understood by the Highland License Manager. Use this command on the license server computer to be sure that the ID in the license file is correct. You may not edit the host identification in the license file; it is encrypted into the authorization codes for the features.
- `show` prints the `license.dat` file being accessed in the current environment; make certain that it contains the Xilinx FEATURES and XXACTD daemon lines.
- `list` lists all users of the Xilinx features.
- `verify` checks that the encryption of the license is correct and that there are no typing errors. It does not require that the license server be running.
- `quick` checks out and checks in the first Xilinx feature in the license file.
- `quick -a` checks out and checks in all of the Xilinx features in the license file. This operation must occur while the server is running.

2. Check the license manager activity by using the `xlmlog` program.

To use this program, type the following:

```
xlmlog ↵
```

If started before the license server, `xlmlog` reports the following server startup messages.

```
xlmasu@zeppo: Xilinx License Manager Autostartup Version #V#  
xlmasu@zeppo: License file: /home/venus/xact/license/  
license.dat  
xlmasu@zeppo: License manager servers will be started on  
zeppo  
xlmasu@zeppo: Server initialization waiting period started  
xlmasu@zeppo: License manager servers were started  
successfully on zeppo  
xlmasu@zeppo: All license manager servers are now up
```

In this example, Zeppo is the name of the license server machine, and `/home/venus/xact` is the installation directory.

Programs and Directories

Several subdirectories are created in the installation directory, including the following:

- `/bin` — executables (required)
- `/data` — data files (required)
- `/xc*` — Unified Libraries
- `/examples` — example designs
- `/tutorial` — tutorial designs
- `/doc` — documentation
- `/license` — license files. Directory should be writable by all users (required)
- `/msg` message files (required)

The *full_path/xact_dir* installation directory also contains the following files:

- `install` — program to perform the installation
- `reminder` — information about the Xilinx environment

The following license manager programs are installed in `$XACT/bin/cpu_type` when you install licensed programs:

- `XXACTD` — Xilinx license daemon
- `lmdown` — network licensing shutdown program
- `lmgrd` — network licensing startup program
- `lmhostid` — reports network licensing host identification
- `lmremove` — network licensing program
- `lmreread` — network licensing program
- `lmstat` — network licensing status program
- `lmver` — network licensing version program
- `xlmasu` — network licensing auto-startup program
- `xlmcon` — network licensing report program
- `xlmdown` — network licensing shutdown program
- `xlmgrd` — network licensing program
- `xlmlog` — network licensing logging program
- `xlmlsu` — network licensing program
- `xlmrmc` — network licensing program
- `xlmtee` — network licensing program

Getting Started & Installation Guide

*Using Xilinx Online
Documentation*

Using Xilinx Online Documentation

Xilinx documentation is available online and in hardcopy format. To access online documentation, you must first install the reader and the set of documents. Using the Acrobat reader, you can view and search information in certain online manuals and application notes.

- If you have a PC, the Xilinx Setup program enables you to automatically install the Adobe[™] Acrobat[™] reader with search capabilities software. If you have already installed the Adobe reader on your PC using the installation program, refer to the “Opening Documents with Acrobat Reader” section, in this chapter.
- To install the reader manually on a PC or on a Sun workstation, continue with the “Installing the Acrobat Reader Manually” section, following, then continue with the “Opening Documents with Acrobat Reader” section.

Installing the Acrobat Reader Manually

Follow the instructions outlined in this section to install the Adobe Acrobat reader manually.

Installing on a PC

Version 2.0 of the Acrobat LE Reader is automatically installed by the Xilinx Setup program if you chose to use online documentation. Refer to the “Installing PC Products” chapter and to the “Accessing Your CD-ROM” appendix for details.

Note: Installation of the Acrobat reader requires 2.5 MB of hard disk space. Moreover, the appearance of the online documents varies with the performance and resolution of the monitor you use.

1. Insert the CD-ROM into a drive and determine the source drive letter. This installation guide assumes that d: is the CD-ROM drive. If it is different on your system, substitute accordingly for the following instructions.

2. Select **File** → **Run** from the Windows Program Manager.

The Run dialog box is displayed.

3. Type the following in the Run dialog box to install the Acrobat reader.

d:\acrobat\disk1\setup.exe

The Acrobat Exchange Installer screen shown in Figure 4-1 is displayed.

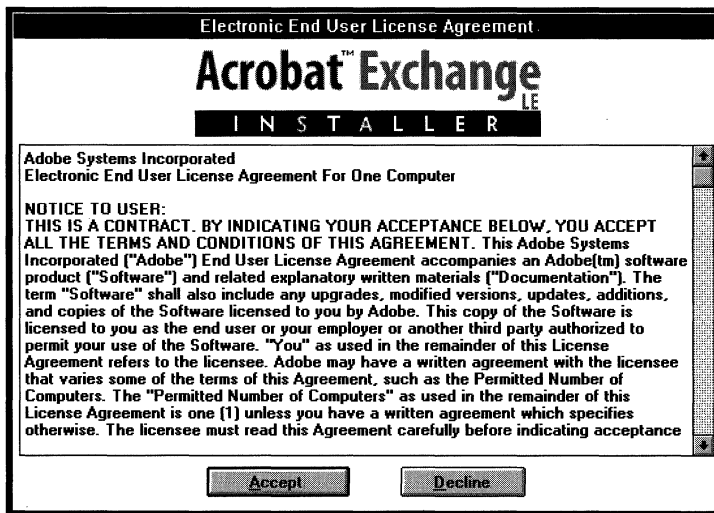


Figure 4-1 Acrobat Exchange Installer Screen

4. After reading the agreement, click on the **Accept** button if you agree to the terms outlined in the license agreement.

The next screen that is displayed enables you to select the Adobe products to be installed.

5. Select the **Adobe Type Manager 3.0** option, as shown in Figure 4-2. The fonts are necessary to view the documents.



Figure 4-2 Selecting Adobe Type Manager

- Click on the **Install** button to install the selected products.

A confirmation screen, shown in Figure 4-3, is displayed. From that screen, you can also change the target installation path.

- Click on the **Install** button to confirm that you want to install the products in the specified target directory.



Figure 4-3 Confirming Installation

Note: If you want to install the document files on your host computer, copy the *.pdf files in the \xact\online\docs, \xact\online\databook, and \proser\online\proser directories from the XACTstep Version 5.2/6.0 CD-ROM to the local hard disk drive.

Installing on a Workstation

Version 1.0¹ of the Acrobat reader is available on Sun workstations² only. Use the instructions outlined in this section to install the Acrobat software on a Sun. Installation of the Acrobat reader requires SunOS Version 4.1.3, OpenWindows Version 3.0 (or greater) or Motif, and 14 MB of disk space.

1. Insert the CD-ROM disk into the CD-ROM drive.
2. Go to the CD-ROM directory as follows:

```
cd /cdrom_dir/acrobat/readers/sun.↓
```

3. Type the following command to install the Acrobat reader:

```
./install.rdr.↓
```

For more information, print the *Getting Started Guide Postscript* file located in the /cdrom_dir/acrobat/readers/sun/getstart.ps directory.

Note: If you want to install the document files on your workstation, copy the *.pdf files in the /xact/online/docs and xact/online/databook directories from the XACTstep Version 5.2/6.0 CD-ROM to the local hard drive.

1. This version has viewing and searching limitations that will be addressed in Version 2.1 of that product. The new version will be sent to you in a future update.
2. Other platforms will be supported in later releases.

Opening Documents with Acrobat Reader

To view online documentation, follow the instructions in this section. These instructions assume that the XACT^{step} Version 5.2/6.0 CD-ROM is mounted on your drive and that you have installed the Adobe reader on your hard disk drive either from the installation program or manually, as explained in the “Installing the Acrobat Reader Manually” section.

Note: The appearance of the online documents varies with the performance and resolution of the monitor you use.

PC Installations

To view documents on a PC, follow these instructions.

1. Double-click on one of the documentation icons —Xilinx Online Docs, Xilinx Apps Info, or PRO Series Online Docs — or open one of the three link page files — linkpage.pdf, dblink.pdf, or prolink.pdf.



Figure 4-4 Xilinx Online Documentation Icons

The specified link page is displayed, as shown in Figure 4-6, listing the available documents.

2. Select the book or application note you want from the link page.

Note: Alternatively, you can double-click on the **Acroread** icon, shown in Figure 4-5, to start the reader. The Acroread icon is located in the Acrobat program group. Open a document by selecting **File** → **Open** from the Adobe reader, specify the path corresponding to the type of documentation you want to list, and open the .pdf file corresponding to the document you want to view.



Figure 4-5 Acroread Icon

- To view Xilinx Online Documents on the CD, open the file:
d:\xact\online\docs\linkpage.pdf
- To view Xilinx Application Information on the CD, open the file:
d:\xact\online\databook\dblink.pdf
- To view PRO Series Online Documents on the CD, open the file:
d:\proser\online\proser\prolink.pdf

Workstation Installations

To view documents on a workstation, follow these instructions.

1. Type **Acroread** at the command line to start the reader.
When you start Acrobat Reader, the Viewer screen is displayed.
2. To open a document, select **File** → **Open** from the Adobe Reader.
The Open file dialog box is displayed.
3. Specify the path for the link page file corresponding to the type of documentation you want to view.

To view Xilinx Online Documents, open the file:

/cdrom_dir/online/docs/linkpage.pdf

To view Xilinx Application Information, open the file:

/cdrom_dir/online/databook/dblink.pdf

The specified link page is displayed, as shown in Figure 4-6, listing the available documents.

4. Select the book or application note you want from the link page.

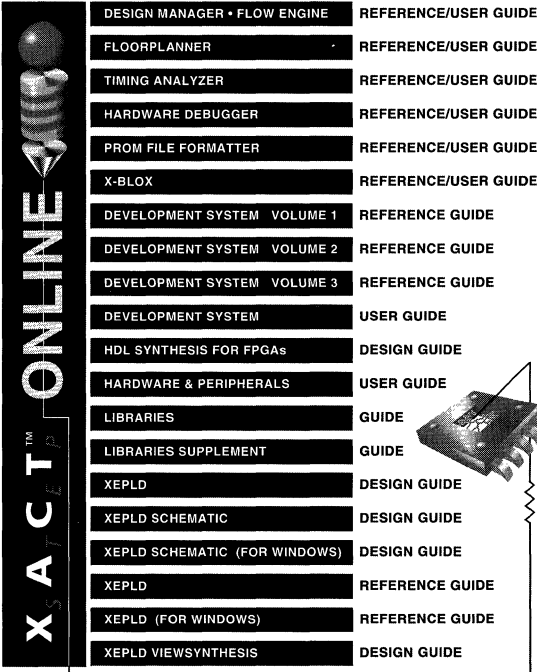
Viewing Documents with Acrobat Reader

This section briefly describes how to navigate through the Xilinx online documentation using the Acrobat Reader with search capabilities and how to adjust the size of the document page on your screen. To view non-Xilinx documentation, refer to your Adobe Acrobat documentation.

Opening an Online Book

After installing the reader and accessing a link page, use the following instructions to open and view documents.

The link page displayed in Figure 4-6, lists the documents that are available from the Xilinx Online Docs link page.



DESIGN MANAGER • FLOW ENGINE	REFERENCE/USER GUIDE
FLOORPLANNER	REFERENCE/USER GUIDE
TIMING ANALYZER	REFERENCE/USER GUIDE
HARDWARE DEBUGGER	REFERENCE/USER GUIDE
PROM FILE FORMATTER	REFERENCE/USER GUIDE
X-BLOX	REFERENCE/USER GUIDE
DEVELOPMENT SYSTEM VOLUME 1	REFERENCE GUIDE
DEVELOPMENT SYSTEM VOLUME 2	REFERENCE GUIDE
DEVELOPMENT SYSTEM VOLUME 3	REFERENCE GUIDE
DEVELOPMENT SYSTEM	USER GUIDE
HDL SYNTHESIS FOR FPGAs	DESIGN GUIDE
HARDWARE & PERIPHERALS	USER GUIDE
LIBRARIES	GUIDE
LIBRARIES SUPPLEMENT	GUIDE
XEPLD	DESIGN GUIDE
XEPLD SCHEMATIC	DESIGN GUIDE
XEPLD SCHEMATIC (FOR WINDOWS)	DESIGN GUIDE
XEPLD	REFERENCE GUIDE
XEPLD (FOR WINDOWS)	REFERENCE GUIDE
XEPLD VIEWSYNTHESIS	DESIGN GUIDE

Figure 4-6 Link Page for the Xilinx Online Docs (linkpage.pdf)

1. From the link page, select the document you want to access by clicking on the appropriate title.

The cover page of the selected document and its Overview Area are displayed. From the cover page, you can jump to the table of contents, to the index of the book, or back to the link page. You view a document by accessing topics for that document either from the table of contents and index, or from the bookmarks in the Overview Area.

Note: To view PRO Series online documents on the PC and to view any documents on Sun workstations, click on the bookmarks listed in the Overview Area, left of the document page. The table of contents and index pages are for reference only and do not include any active links. In the case of Sun workstations, these limitations are due to viewing limitations of Version 1.0 of the Acrobat Reader that will be addressed in Version 2.1.

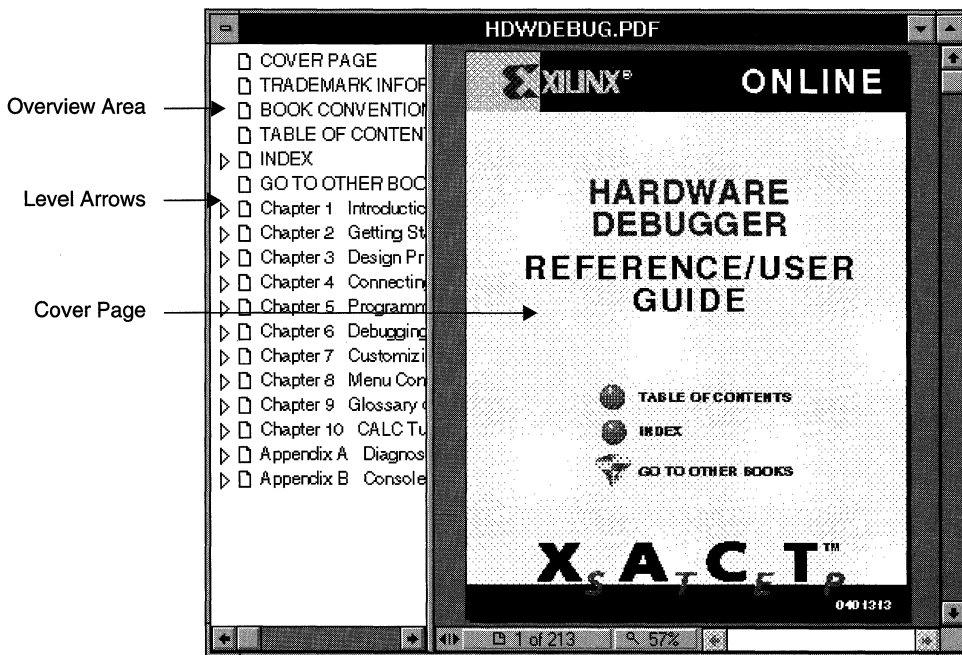


Figure 4-7 Cover Page and Overview Area (Left)

2. Click on the **Table of Contents** or **Index** entry on the cover page of the book to access the list of linked topics for that book. Alternatively, you can select a topic from the Overview Area, left of the document page.

In a document, the entries in the table of contents, the numbers next to the entries in the index, cross-references to tables and figures are all active links.

3. To access a linked topic, park the mouse pointer, which is displayed as a hand against your document, over a live link.

The mouse pointer changes into a finger, indicating a selectable link.

4. Click on the desired entry to jump to the topic linked to that entry.

The corresponding document page is displayed.

Closing the Overview Area

When you open a document, the Overview Area, which is a list of entry points to access parts of a document, is displayed by default.

Use the Page Only button, shown in Figure 4-8, to close the Overview Area of the window.



Figure 4-8 Page Only Button

Displaying Bookmarks

Use the Bookmarks and Page button, shown in Figure 4-9, to open the Overview Area next to the document page and display a list of bookmarks for that document. The Overview Area is a hierarchical table of contents made of bookmarks. Bookmarks constitute a list of access points to topics of interest in a document.



Figure 4-9 Bookmarks and Page Button

Click on a bookmark to jump to the location marked by the bookmark.

A bookmark preceded by a right level arrow indicates an underlying list of bookmarks. Click on the level arrow to view the underlying

level of bookmarks. The arrow changes into a down arrow. To hide the lower level of bookmarks, click on the down level arrow.

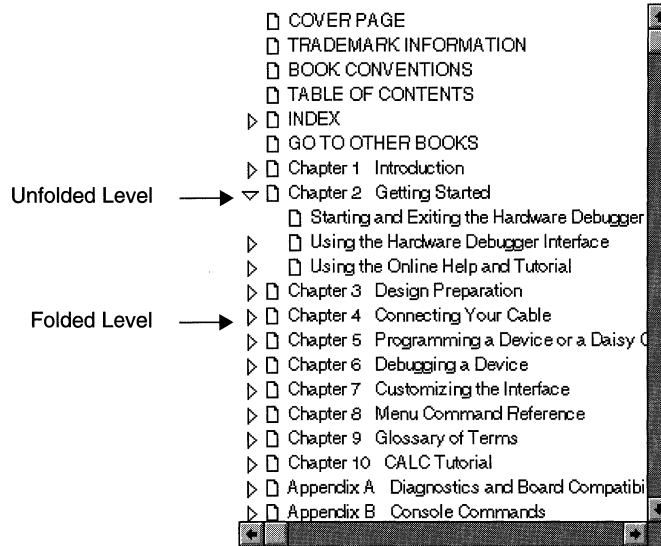


Figure 4-10 Level Arrows for Bookmarks

Iconizing Document Pages

Use the Thumbnails and Page button, shown in Figure 4-11, to open the Overview Area and display thumbnail images for each document page next to the current document page area.



Figure 4-11 Thumbnails and Page Button

To access a page marked by a thumbnail, click on the appropriate thumbnail.

Viewing an Oversized Document

Use the Hand button, shown in Figure 4-12, to move an oversized document page on the screen and view different parts of the current

page that are hidden from view. Drag the hand tool in the direction in which you want to move the page.



Figure 4-12 Hand Button

Changing the Size of the Document Page

Use the Zoom buttons, shown in Figure 4-13, to magnify or reduce the page display by a factor of 2. The status bar displays the size of the document.



Figure 4-13 Zoom Buttons

Selecting Text

Use the Select Text button, shown in Figure 4-14, to select text in a document. After selecting the text, copy it to the Clipboard using the Edit → Copy command. To select graphics in a document, click on the Tools → Select Graphics command.



Figure 4-14 Select Text Button

Browsing a Document

Use the Browse buttons, shown in Figure 4-15, to display the first page (cover page) or last page (trademark page) of a document and to navigate backwards or forwards in the document, one page at a time.



Figure 4-15 Browse Buttons

Retracing Your Steps in the Document

Use the Go Back and Go Forward buttons, shown in Figure 4-16, to move back in a document and redisplay the document pages that you have viewed. These buttons can also take you back to previous documents you have viewed.



Figure 4-16 Go Back and Go Forward Buttons

Displaying the Page Using the Default Size

Use the Actual Size button, shown in Figure 4-17, to display the page at the default size, 100 percent.



Figure 4-17 Actual Size Button

Adjusting the Page Size to Fit the Window

Use the Fit Page button, shown in Figure 4-18, to adjust the size of the page so that it fits in the Acrobat Reader window.



Figure 4-18 Fit Page Button

Adjusting the Page Width

Click the Fit Width button, shown in Figure 4-19, to adjust the page width so that it fills the width of the Acrobat Reader window. Click this button while holding down the Control key to view the page across the window without its margins.



Figure 4-19 Fit Width Button

Finding Information

Use the Find button, shown in Figure 4-20, to search for a word, part of a word, or multiple words in a document.



Figure 4-20 Find Button

Searching for Information (PC Only)

Use the Search Button, shown in Figure 4-21, to search indexed PDF documents and generate a list of occurrences of a particular word, a part of a word (Word Stemming), the sound of a word (Sounds Like), the meaning of a word (Thesaurus). You can also search a word by matching the case of the word (Match Case) or search words that occur in proximity to one another (Proximity). Then, use the Search Results button to display the list.



Figure 4-21 Search Button

Note: To do a full-text search, you must first load the compiled indexes for the set of books you are using by clicking the Indexes button on the Adobe Acrobat Search dialog box. See Figure 4-22. The index files for each group of online documents are as follows:

- Xilinx Apps Info: \xact\online\docs\onlinedb.pdx
- Xilinx Online Docs: \xact\online\databook\online.pdx
- PRO Series Online Docs: \proser\online\proser.pdx

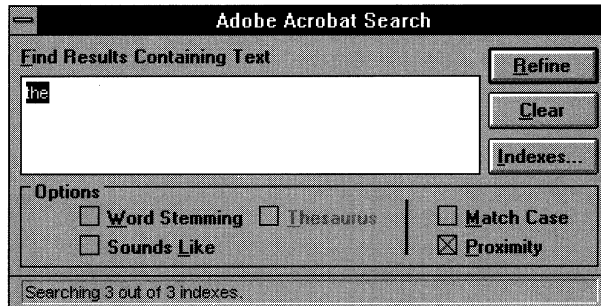


Figure 4-22 Search Dialog Box

Displaying Search Results (PC Only)

Use the Search Results button, shown in Figure 4-23, to display the results of your search.



Figure 4-23 Search Results Button

The name of the document in which the word occurs, appears in the Search Results dialog box, as shown in Figure 4-24.

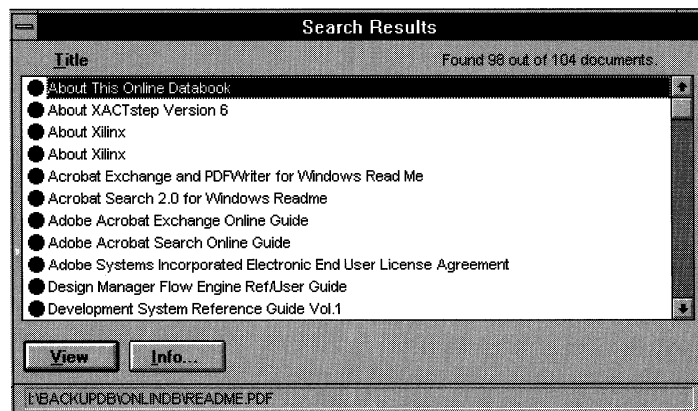


Figure 4-24 Search Results Dialog Box

Browsing Search Results (PC Only)

Use the Browse Search Results buttons, shown in Figure 4-25 to jump to the documents listed in the Search Results dialog box and view the pages of documents that include matches for your search.

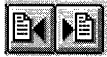


Figure 4-25 Browse Search Results Buttons

Documentation Categories

This section covers the types of online documents available for use with Xilinx products. The following types of documents are available online or in hardcopy format.

Xilinx Apps Info

Refer to the link page of the Xilinx Apps Info set of documents for a list of application notes that are available online. The same application notes are part of *The Programmable Logic Data Book*.

Xilinx Online Docs

This category refers to documents available online or in hardcopy format.

- Reference/User Guides for XACTstep 6.0 and 5.2 software
- Interface software libraries guides
- Reference/User Guides for XEPLD 6.0 and 5.2 software

Table 4-1 XACTstep 6.0 Core Software Manuals (Windows)

Reference/User Guides
<p><i>Design Manager/Flow Engine Reference/User Guide</i></p> <p>This manual describes the Design Manager, a tool for managing multiple implementations of a same design allowing you to easily retarget designs to devices and to choose the best logic implementation for each design you create. It also describes the Flow Manager, which implements designs, and explains how to interact with other programs that run in the Design Manager environment; namely, the Floorplanner, the Design Editor, the Timing Analyzer, the Hardware Debugger, the PROM File Formatter, and the PROM Programmer.</p>
<p><i>Floorplanner Reference/User Guide</i></p> <p>This manual explains how to use the Windows-based graphical user interface to place the logic of your design manually before or after running PPR.</p>
<p><i>Timing Analyzer Reference/User Guide</i></p> <p>This manual explains how to display post-routing delays along specific paths or all paths in your design.</p>
<p><i>Hardware Debugger Reference/User Guide</i></p> <p>This manual describes how to program, verify, and debug FPGA devices. It describes the XChecker cable and explains how to connect the cable pins to your target device for various functions: downloading, verification, and debugging. It also includes a tutorial for debugging a design using the demonstration boards as target devices.</p>
<p><i>PROM File Formatter Reference/User Guide</i></p> <p>This manual explains how to use a Windows-based tool to format bitstream files into HEX format files compatible with Xilinx and third-party PROM programmers. You use the PROM files to program a PROM device, which is then used to configure daisy chains of one or more FPGAs for one application (configuration) or several applications (reconfiguration).</p>

Table 4-2 XACTstep 5.2 Core Software Manuals (UNIX/DOS)

Reference/User Guides
<p><i>Development System User Guide</i> This guide describes the Xilinx design flow, including design entry, implementation, and verification. It also addresses design entry methodology selection, configuration modes as well as readback and verification. This guide also describes boundary scan for XC4000 devices.</p>
<p><i>Development System Reference Guide, Vol 1, 2, and 3 (DOS and Workstations)</i> This book describes the XACTstep Development System software, which includes programs to generate XNF files, LCA files, and BIT files. The book covers all the program options and files that are generated by these programs.</p>
<p><i>Floorplanner Reference/User Guide (Workstations)</i> This manual explains how to use the graphical user interface to place the logic of your design manually before or after running PPR.</p>
<p><i>HDL Synthesis for FPGAs Design Guide</i> This guide addresses design synthesis of HDL-based designs. It also provides coding tips to optimize design implementation.</p>
<p><i>Hardware & Peripherals User Guide (DOS and Workstations)</i> This guide describes the Xilinx demonstration boards, the HW-112 Programmer, XPP, and the XChecker program and cable.</p>

Table 4-3 Interface Software Libraries Manuals

Reference/User Guides
<p><i>X-BLOX Reference/User Guide</i> This guide describes the high-level modules you can use to speed up design entry and the attributes that support logic synthesis. It also explains how to use the X-BLOX program to create designs and the different types of logic synthesis completed by the X-BLOX program.</p>
<p><i>Libraries Guide</i> This book describes the modules of logic, or macros, that you use to create your designs as well as the attributes and constraints used to process macros during logic implementation. It also discusses relationally placed macros (RPMs), which are macros that contain relative location constraints (RLOC) information. The XACTstep libraries enable you to convert designs easily from one family to another.</p>

Reference/User Guides
<p><i>Libraries Supplement Guide</i></p> <p>This book describes the primitives and the macros that you use to create XC5200 and XC4000E designs. It also describes the attributes and constraints used to process the designs during design implementation.</p>

Table 4-4 XEPLD 6.0 Core Software Manuals (Windows)

Reference/User Guides
<p><i>XEPLD Reference Guide for Windows</i></p> <p>This guide describes the XEPLD version of the Design Manager. The Design Manager is used to manage multiple implementations of a same design. The manual explains how to implement your design using schematic entry, behavioral entry, or synthesis. It also describes how to interact with the Flow Manager, and the Timing Analyzer.</p>
<p><i>XEPLD Schematic Design Guide for Windows</i></p> <p>This guide covers design techniques for schematic entry tools. It also includes information to embed behavioral modules and migrate designs between different families.</p>

Table 4-5 XEPLD 5.2 Core Software Manuals (UNIX)

Reference/User Guides
<p><i>XEPLD Reference Guide</i></p> <p>This book describes the XEPLD Development System software, which includes programs to create XNF, JEDEC, VMH, and HEX files. It also addresses schematic design entry, behavioral design, and the PLUSASM language.</p>
<p><i>XEPLD Design Guide</i></p> <p>This guide covers behavioral design implementation for XC7000 devices. It also includes PAL design conversion.</p>
<p><i>XEPLD Schematic Design Guide</i></p> <p>This guide covers design techniques for schematic entry tools. It also includes information on how to embed behavioral modules and migrate designs between different families.</p>
<p><i>XEPLD ViewSynthesis Design Guide</i></p> <p>This guide covers logic synthesis for EPLD designs.</p>

Viewlogic PRO Series Online Docs

The online documents available for the Viewlogic PRO Series include the design analysis and design entry books.

Table 4-6 PRO Series Manuals (Windows)

Reference/User Guides
<p><i>PRO Series: Design Entry</i></p> <p>This book contains the following manuals:</p> <ul style="list-style-type: none">•Using PRO Series•PROcapture User's Guide•PROcapture Reference Manual•PCB Interface User's Guide•PRO Series Utilities•PROgen User's Guide•EDIF User's Guide
<p><i>PRO Series: Design Analysis</i></p> <p>This book contains the following manuals:</p> <ul style="list-style-type: none">•PROsim User's Guide•PROsim Reference Manual•PROwave User's Guide•PROwave Reference Manual

Getting Started & Installation Guide

Disk Space Management

Disk Space Management

This chapter covers disk space management techniques. In particular, it explains how to decide which software programs you should install with the Custom Install program and how to use the Custom Install option of your installation program.

Installation Tips

This section explains how to install only the software required to support the particular FPGA or EPLD devices you intend to use. You should use the Custom Install program for this type of installation. Following these guidelines can save many megabytes of disk space.

1. If you are installing a package, the following products are displayed in the product selection box of both the Quick and Custom Installation screens:
 - Third-party interface products
 - FPGA core tools
 - EPLD core tools
 - X-BLOX
2. Choose FPGA core or EPLD core depending upon the devices you will be using.
3. Choose X-BLOX only if you plan to use the X-BLOX product.
4. Install a third-party interface product and only the library or libraries you need.
 - XC2000 library
 - XC3000 library (XC3000, XC3000A/L, XC3100, and XC3100A)

- XC4000 library
 - XC5200 library
 - XC7000 library
 - X-BLOX library
5. When installing FPGA core from the Standard Package or DS-502, select only the device support options that you need.

For example, if you intend to design an XC3042A device using Viewlogic but might be upgrading to an XC3064A at a later time, you could install the following selection of products:

DS502:

- FPGA Core Tools
- XC3000A/XC4000 Place and Route
- Design Manager
- Hardware Debugger
- PROM File Formatter
- Floorplanner
- Timing Analyzer
- PROM Programmer
- XC3000A/XC4000 Place and Route
- XACT Design Editor
- XChecker Download/Readback
- XPP PROM Programmer
- Example files
- XC3042A, XC3042L, XC3142A support
- XC3064A, XC3064L, XC3164A support

Note: You can install the XC3064A files now or at the time you decide to use them.

DS290:

- PROsim and interface
- XC3000 Library
- X-BLOX Library

DS390:

- ViewDraw and interface or PROcapture and interface

In this example, the XC3000 and X-BLOX libraries are only selected once, since they are the same in the DS-290 and DS-390 packages. You only need to select them once, but a multiple selection would do no harm.

Customizing Your Installation

The Custom Install option provides for disk space management capabilities by enabling you to do the following:

- Specify different paths for the different products that constitute your software package.
- Install only the parts of the software product you will be using.
- Use the disk space analysis features of the Install program to determine where to install your software.

Custom Install Screen

Follow these instructions to access the Custom Install screen.

1. Select **Custom** from the Main Window.

The screen appears as shown in Figure 5-1.

2. In section 1 of the installation screen, click on the down arrow located to the right of the selection box.

A list of products or packages appears.

3. Select the products you wish to install by clicking on the appropriate item on the list.
4. Set the YES/NO selection status for the products and options you wish to install.

5. Click on **Set Path** to set different paths.

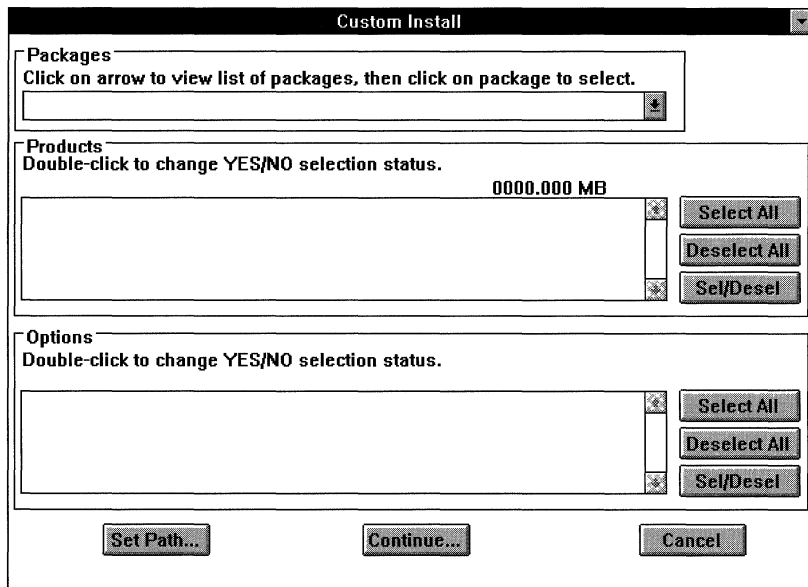


Figure 5-1 Custom Installation Screen

Set Path Screen

The Set Path window allows you to review the list of products that you can install on your system and the space requirements for each product.

- Path indicates the destination directory for the product.
- Prdct Sz (Product Size) indicates the total size of the program in megabytes (MB).
- Need indicates the required disk space for the product installation. This space can be less than the product size if you already have an installation of the product in the displayed path. If you reinstall the product, older files are replaced.
- Analyze Disk Space enables or disables disk space analysis. This feature allows you to determine if you have enough space on your system to install software, and if you do not have enough space, the feature tells you how much space you need. When this

feature is turned off, you can save processing time. Figure 5-2 shows the Set Path screen with the Analyze Disk Space option turned on.

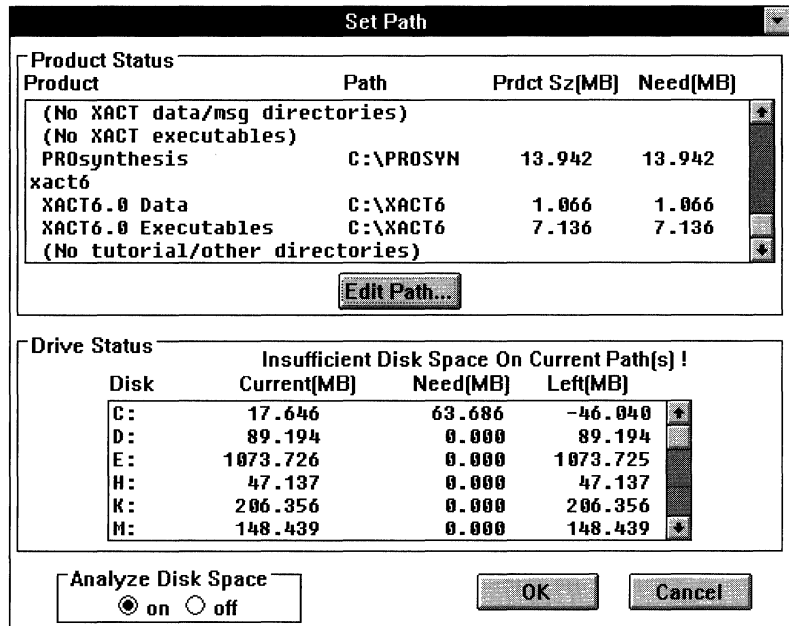


Figure 5-2 Set Path Window with Analyze On (PC Screen)

You can edit a path or set your installation to different directories as follows:

1. Highlight a product in the product selection box, then click on the **Edit Path** button.

The Edit Path window appears and displays the installation paths for the selected products.

2. You can choose to edit your path by clicking on the path shown in the selection box or return to the previous screen by clicking on **OK** or **Cancel**.

PC and workstation Set Path screens differ slightly. PC screens include a Drive Status section showing available space on all drives (Current), required disk space to complete the installation (Need),

and remaining space after completing the installation (Left). When Analyze Disk Space is turned on, the Drive Status section on the PC uses the “Need” values of each drive. Refer to Figure 5-2.

Overwriting Existing Files

If you have existing Xilinx products, Xilinx recommends that you install to a new directory provided you have enough disk space. If you install new software in a directory that contains old software, Install overwrites the old software without warning you.

The only time Install and Setup ask you if you wish to overwrite software is when you are installing older files over newer ones. To overwrite software unconditionally, use the Force File Overwrite option of the installation program.

Force File Overwrite

The Force File Overwrite option is in the Settings menu. By default, this option is turned off and the installation program does not install old files over new ones.

There might be times when you need to install all the files on your media regardless of the file date:

- If you modified the dates of the files of a previous installation
- If you install a file from the bulletin board

Use the Force File Overwrite option to overwrite the files without being prompted by the system to confirm this operation.

Getting Started & Installation Guide

*System Requirements for
Xilinx Software*

System Requirements for Xilinx Software

Before installing the software, verify that your system meets the requirements outlined in this appendix. Alternatively, you can run the software directly from your CD-ROM. Refer to the “Accessing Your CD-ROM” appendix for more information.

Note: If you have an Advanced package, which includes XACT Foundry 7.0 software, such as one of the Viewlogic Advanced packages or the Third-Party Alliance Advanced package, use a separate installation program to install it. Refer to the Xilinx XACT Foundry 7.0 Installation Guide provided with these products for system requirements and installation instructions.

Disk Space

To install the XACT*step* Development System Tools for FPGA and EPLD devices and one of the supported interfaces, you need approximately 80 to 180 MB, depending on which options you choose. Table A-1 indicates approximate space requirements for each software product.

Disk space requirements for specific products are indicated during the installation program execution. The “Disk Space Management” chapter offers installation tips that can save disk space.

Table A-1 Disk Space Requirements

Software	Approximate Space Requirements (MB) ^a
FPGA Core	30 to 100
EPLD Core	30
PRO Series PROcapture and PROsim	20
PRO Series PROsynthesis	14
Viewlogic Interface	7 to 16
OrCAD Interface	20

a. The actual space required to install these tools is dependent on which devices and features you install. Refer to the "Disk Space Management" chapter for information on how to install a subset of the product features.

PC System Requirements

PC systems require the following:

- IBM-compatible PC 486 or Pentium
- DOS 5.0 or later operating system

Note: The DoubleSpace program that is shipped with DOS 6.0 is not reliable. Xilinx recommends that you upgrade to DOS 6.21 or 6.3.

- MS Windows 3.1 or later to run the Xilinx Setup program
- WIN32S 1.25.142.0 or later, provided on the Xilinx CD-ROM

Note: You can check the version number of your WIN32s program in the \windows\system\win32s.ini file.

- VShare.386 for PRO Series installations only, provided on the Xilinx CD-ROM

Note: Win32s and VShare.386 are owned and developed by Microsoft Corporation.

- RAM memory:

The following table indicates the recommended memory for implementing your FPGA and EPLD designs. Memory requirements are environment and design dependent. The Windows operating system adds additional memory overhead, as

do any active Windows applications. Whereas some designs can be implemented using less than the specified memory, other complicated or large designs may require additional memory.

Table A-2 Recommended Memory and Swap Space

Recommended Memory	Recommended Windows Swap Space	Device Ranges
16 MB RAM	16 MB	XC2000 (all devices) XC3x20x — XC3x42x (all variants) XC7000 (all devices) XC3x64x — XC3x90x XC4002x — XC4006x (all variants) XC5202 — XC5204
32 MB RAM	32 MB	XC3195x (all variants) XC4008x — XC4013x (all variants) XC5206 — XC5210 (all variants)

Note: When running XACTstep Version 6.0, 460 KB of free conventional memory is recommended. This number reflects the free conventional memory available while Windows is running.

- VGA graphics card
- One parallel and two serial ports (one for the mouse and one for the serial download cable)
- Windows-compatible mouse
- Xilinx recommends that you have FILES and BUFFERS set to a minimum of 25 in the CONFIG.SYS file

In addition, the following requirements must be met to run the installation program.

- ISO9660 CD-ROM drive
- At least 4 MB of disk space on the hard disk drive to run the Xilinx Windows Setup program. If you are using the DOS Install, you need 2 MB.
- 8 MB of RAM memory

Note: Setup, the Xilinx installation program for Windows, supports both Novell and PC-NFS networks; however, if you install software from a CD-ROM and you use a Novell network, you must use Novell 3.12 or higher. The installation program for DOS programs supports Novell networks only.

Workstation System Requirements

Workstations require the following:

- Workstation types:
 - Sun4 (SPARC) with SunOS 4.1.x
 - HP-PA 9000 (RISC) Model 700 with HP-UX 9.05
 - IBM RS6000 with AIX 3.2.5
 - DEC Alpha AXP with OSF/1 Version 1.3 or 3.0
- RAM: 64 MB (recommended)
- Swap space: 75 MB
- TCP/IP software
- Display: X-Windows

In addition, the following requirements must be met to run the Install program using a CD-ROM.

- CD-ROM drive: ISO9660
- Disk space: 10 MB
- RAM memory: 32 MB

Getting Started & Installation Guide

Accessing Your CD-ROM

Accessing Your CD-ROM

This appendix explains how to run software directly from your CD-ROM drive. It also describes how to access a Sun CD-ROM drive from your PC to install software.

Using an Executable CD-ROM

To run the *XACTstep* software on your PC directly from the CD-ROM, configure your PC as explained in this section. This section assumes that d: is your CD-ROM drive.

Windows and DOS Applications

To configure your PC to run *XACTstep* under Windows, follow the steps in this section. This information also applies to DOS applications.

You must first perform the following steps from DOS before invoking Windows. You cannot complete these steps from Windows.

1. Edit your AUTOEXEC.BAT file and include in your path the directories for the software products you will be using.

d:\xact (Core products, X-BLOX, Xilinx ABEL)

d:\orcad (OrCAD products)

For example, if d: is the CD-ROM drive, and you plan to use the *XACTstep* tools and the OrCAD products, you must set the path command as follows:

```
path=other_paths;d:\xact;d:\orcad;other_paths
```

2. Set the XACT environment variable for the *XACTstep* Version 6.0 tools.

You can either set the variable manually from the DOS command line by creating and running a batch file, or you can modify and run the AUTOEXEC.BAT file. The XACT variable must point to the directories of all the software products that you plan to use.

For example, if d: is the CD-ROM drive and you plan to use the XACTstep tools and the OrCAD products, set your XACT variable as follows:

```
set xact=d:\xact;d:\orcad
```

3. Create a writable directory on your hard disk drive for the XACTstep Version 6.0 tools to store user-specific initialization files. Then, set the XACTUSER environment variable to point to the directory.

```
mkdir c:\xactuser
```

```
set XACTUSER=c:\xactuser
```

4. To run PRO Series software, refer to the "Running Viewlogic PRO Series from CD-ROM" section.

Note: If you are installing XACTstep Development System software for Windows, you must also set the TEMP variable, because some XACTstep programs use the same TEMP variable as Windows to store temporary files. If this variable is not set, and the directory to which it points is not valid and writable, the software will not run.

- Create a writable directory to store the temporary files as follows:

```
mkdir c:\tmp
```

- Include the following line in your AUTOEXEC.BAT file:

```
set TEMP=c:\tmp
```

- To verify that the TEMP environment variable is set, type **set** at the DOS prompt.

You can then start your software from your hard disk, but the software really executes from the CD-ROM.

Note: To run your Windows applications from the CD-ROM, create a Windows group and an icon. Refer to the "Troubleshooting" appendix for information.

You can access both the tutorials and the online documentation from the CD-ROM using the Xilinx Setup program. Refer to the "Accessing

the Online Tutorials” and “Accessing Online Documentation” sections, in this appendix.

Running Viewlogic PRO Series from CD-ROM

To run the Viewlogic PRO Series from a CD-ROM drive, you must configure your system properly and set up a program group in Windows to correctly access the software located on the CD-ROM.

Configuring the System

To configure your system to run Viewlogic PRO Series from a CD-ROM drive, follow this procedure.

1. If you are running Windows, exit it.
2. Create a local PRO Series directory, as shown in the following example:

```
c:\cdproser
```

3. Create a \standard subdirectory in the local PRO Series directory:

```
c:\cdproser\standard
```

4. Create a local XACTstep directory:

```
c:\cdxact
```

5. Create a \data subdirectory in the local XACTstep directory:

```
c:\cdxact\data
```

6. Copy the partlist.xct file from the CD-ROM XACTstep \data subdirectory to the local XACTstep \data subdirectory:

```
copy d:\xact\data\partlist.xct c:\cdxact\data
```

7. Make the following changes to your autoexec.bat file:

```
set wdir=c:\cdproser\standard;d:\proser\standard
```

Note: The first directory in the WDIR environment variable *must* be a writable directory. This is where the project information will be written. The second path included in WDIR is the CD PRO Series \standard directory, which is used by the PRO Series software to find data files.

```
set xact=c:\cdxact;d:\xact;d:\proser
```


Note: The first directory in the XACT environment variable *must* contain a writable version of the partlist.xct data file in its \data subdirectory. Xilinx PROflow uses this file and fails if you use the CD-ROM version, which is not writable. The second path included in XACT is the CD XACTstep directory, which the XACTstep software uses to locate data files.

```
set path=d:\xact;d:\proser;other_paths
```

Note: The only paths added to the PATH environment variable are the \xact and \proser CD-ROM executable paths. You do *not* need to add the local paths created in the previous steps.

```
set xactuser=c:\cdxact
```

Note: To ensure that the XACTstep software contains a writable directory, set the XACTUSER environment variable to a local directory. Because a local XACTstep directory has already been created to store a local copy of the partlist.xct file, you can use it as the temporary file storage area as well.

8. Reboot your machine or execute your autoexec.bat file so that the new changes take effect.
9. Start Windows.

Creating a CD-ROM Program Group

Now that you have properly configured your system to run the software from the CD-ROM, all that remains to do is to create a CD-ROM program group. To create a program icon for Xilinx PROflow, perform the following steps.

1. To create a new program group in the Program Manager, select the **File** → **New** command.

The New Program Object dialog box appears.

2. Select the **Program Group** radio box and click on **OK**.

The Program Group Properties dialog box appears.

3. Enter the name of the new group in the Description text field and click on **OK**. For example, type the following:

```
CDROM XACTstep 6.0
```

The new program group is created and displayed in the Program Manager.

4. To create a new program item in the new group, select **File** → **New**.

5. Select the **Program Item** radio box and click on **OK**.

The Program Item Properties dialog box is displayed.

6. In the Description text field, type **Xilinx PROflow**.
7. In the Command Line text field, type **d:\proser\psfm.exe**.
8. In the Working Directory text field, type **c:\cdproser**.

Note: It is important that the working directory be located on the same drive as the projects that will be used in Xilinx PROflow.

9. Click on **OK**.

10. If you are using a network connection to mount the CD-ROM, confirm the Network Path Specified dialog box.

The CD-ROM XACTstep 6.0 program group is now updated to include the Xilinx PROflow program icon.

Note: The procedure just given assumes that c:\ is a local drive and that d:\ is the CD-ROM drive that contains the XACTstep CD-ROM.

Using Online Tutorials and Online Documents

XACTstep software includes interactive tutorials for Windows-compatible tools. It also includes online documents for Windows PCs and Sun 4 workstations. You can run both the tutorials and the online documents from the CD-ROM.

The tutorials include procedures and demonstrations of the procedures and are invoked either by double-clicking on the Learning Center icon or by selecting the Online Tutorial option from the Help menu of each Windows-based software tool.

Refer to the "Installing Online Documents" section of the "Installing PC Products" chapter for information on how to install these documents.

Accessing a Workstation CD-ROM Using PC-NFS

You can access a Sun CD-ROM drive from a PC located on the same network to install software.

Note: You can install software from a Sun CD-ROM to a PC only if you are in a PC-NFS environment.

1. If your CD is not already mounted, mount it on the CD-ROM drive of your Sun workstation as follows:

```
# mkdir /cdrom_dir ↵  
# mount -t hsfs -o ro /dev/sr0 /cdrom_dir ↵
```

Note: Workstation users must have root privileges to use mount commands (# = root prompt, % = user prompt). Directories and device names can vary; therefore, check these names with your system administrator.

2. From your UNIX terminal, export the CD-ROM drive with the following command.

```
/usr/etc/exportfs -a
```

Note: Mounting and exporting the CD-ROM drive requires system administrator privileges.

3. From your PC, mount a drive to the CD-ROM drive using the following command.

```
net use pc_drive: sun_node:/cdrom_dir
```

The *pc_drive* variable is a PC drive that is not currently in use, *sun_node* is the host name of the Sun workstation where the CD-ROM drive is mounted, and */cdrom_dir* is the CD-ROM mount directory, as shown in the following example.

```
net use k: cotati:/cdrom
```

Getting Started & Installation Guide

*Setting Up the Xilinx
Environment*

Setting Up the Xilinx Environment

This appendix explains how to update your configuration file manually for your computer. It applies to installations performed with the Xilinx installation program. Refer to the appropriate section for your type of computer.

Configuring Your Personal Computer

If Install could not update your configuration file, you must update your AUTOEXEC.BAT file manually before running your software. Install appends a list of suggested changes to C:\AUTOEXEC.XLX.

Updating the Environment Variables

Ensure that you set the environment variables and installation directory as specified in this section.

When manually modifying the AUTOEXEC.BAT file, do not include any space characters in the definition of the environment variables, either before or after the equal sign, or at the end of the line. Spaces prevent the software from finding the necessary data files.

Novell Network Installations

If you are installing on a Novell network, ensure that your XACT environment variable points to an explicit path:

```
set XACT=n:. (Incorrect)
```

```
set XACT=n:\full_path\xact (Correct)
```

XACTstep Development System and OrCAD Installations

To update your AUTOEXEC.BAT file for the XACTstep Development System software or the OrCAD interface, use the following guidelines.

1. If you are running Windows, exit Windows.
2. Ensure that in your AUTOEXEC.BAT file, the installation directories for the software products you will be using (for example, c:\xact and d:\orcad) are included in both the path and the XACT environment variable.

For the example where c:\xact and d:\orcad are used as the installation paths, the lines in the AUTOEXEC.BAT file would read as follows:

```
path=other_paths;c:\xact;d:\orcad; other_paths  
set XACT=c:\xact; d:\orcad
```

Only the executable directory must be in the Path statement to satisfy Xilinx software requirements. Only the data directory must be included in the XACT environment variable.

3. Create a writable directory on your hard disk drive for the XACTstep Version 6.0 tools to store user-specific initialization files. Then, set the XACTUSER environment variable to point to the directory.

```
mkdir c:\xactuser
```

```
set XACTUSER=c:\xactuser
```

Note: If you are installing XACTstep Development System software for Windows, you must also set the TEMP variable, because some XACTstep programs use the same TEMP variable as Windows to store temporary files.

- Create a writable directory to store the temporary files as follows:

```
mkdir c:\tmp
```

- Include the following line in your AUTOEXEC.BAT file:

```
set TEMP=c:\tmp
```

- To verify that the TEMP environment variable is set, type **set** at the DOS prompt.
- 4. Reboot the PC after making changes to the AUTOEXEC.BAT file or simply execute the AUTOEXEC.BAT file.

Xilinx ABEL Installations

When installing Xilinx ABEL on a PC, install it in the same directory as the XACTstep tools.

To configure Xilinx ABEL, set your path and XACT environment variable to point to the installation path, as explained in the “XACTstep Development System and OrCAD Installations” section earlier in this appendix. Include the XABEL.EXE executable in your path and point your XACT environment variable to the Xilinx ABEL installation directory.

- If you are installing Xilinx ABEL on top of the XACT software, that is, in the xact installation directory, XABEL.EXE is in c:\xact for example. In this case, the path and the XACT environment variable must include c:\xact. You only need to include the following information:

```
PATH=c:\xact
```

```
XACT=c:\xact
```

- If you are installing Xilinx ABEL to a different directory than the XACT software, include that information in your path and XACT variable. For example, you could specify the directories as follows:

```
PATH=c:\xact; d:\xabel
```

```
XACT=c:\xact; d:\xabel
```

Xilinx PRO Series Installations

To update your AUTOEXEC.BAT file for the Xilinx PRO Series or Xilinx PRO Series interface, use the following guidelines.

1. Include the installation directory (for example, c:\proser) in the PATH variable.
2. The XACT environment variable must include the directory that contains the \unified directory. By default, the Setup program

installs the \unified directory in c:\proser.

3. For example, if you are using c:\xact as the XACTstep Development System path and c:\proser as the Xilinx PRO Series path, the line in the AUTOEXEC.BAT file must read as follows:

```
set XACT=c:\xact;c:\proser
```

4. Set the WDIR environment variable as shown in the following example.

if c:\proser is used as the installation path, the lines in the AUTOEXEC.BAT file would read as follows:

```
path=other_paths;c:\proser;other_paths  
set WDIR=c:\proser\standard
```

5. Reboot the PC after making changes to the AUTOEXEC.BAT file or simply execute the AUTOEXEC.BAT file.

Note: The PRO Series software *cannot* be used in conjunction with any other versions of the Viewlogic Workview 4.1 software. There *cannot* be references to Workview in the path and in the WDIR environment variables.

Increasing Environment Space

The DOS environment space allocated on your PC might be insufficient to accommodate the new environmental variables.

You can increase your DOS environment space by adding the following statement to your CONFIG.SYS file.

```
shell=c:\dos\command.com /p /e:720
```

The number 720 represents the number of bytes reserved for the DOS environment and can be replaced by any number.

The “Out of Environment Space” message is often difficult to see. You can use the DOS Set command to verify that the environment is loaded correctly. Entering the Set command at the DOS prompt displays all current environment variables and the path. If anything defined in AUTOEXEC.BAT is not listed there, you must increase the DOS environment space.

Setting the Graphics Mode

As a default, the graphics mode is set to VGA4.

To change the graphics mode, add the GRMODE environment variable to the AUTOEXEC.BAT file, as follows.

```
set GRMODE=graphics_mode
```

These are the acceptable *graphics_mode* entries:

VGA4	(4-Color VGA 640 x 480)
VGA8	(8-Color VGA 640 x 480)
VGA16	(16-Color VGA 640 x 480)
VGAP4	(4-Color VGA 800 x 600)
VGAP8	(8-Color VGA 800 x 600)
VGAP16	(16-Color VGA 800 x 600)

For a complete list of supported graphics modes, refer to the file `GL16mode.xct` located in your *drive:\xact_dir\data* directory. You can also refer to the `GL16mode.prt` file located in the same directory for more information.

Configuring Your Workstation

Before using the Xilinx software, you must configure your workstation to run the software. This section explains how to update your `.cshrc` or `.login` file if you are using a C shell. The Install program stores suggested changes in a file called `reminder`, which is located in your CD-ROM or tape installation directory.

XACTstep Development System Software

The following explains how to configure your system to run the XACTstep Development System software.

1. Add the *full_path/xact_dir/bin/cpu_type* directory to your path.
CPU types include `hppa`, `alpha`, `rs6000`, or `sparc`.
2. Define the XACT environment variable and set it to the name of the directory into which you installed the software.

3. To use XDM and XDE, you must also run an X-Windows display manager (that is, not a SunView display), and you must include a DISPLAY environment variable. Define DISPLAY as the name of your display. DISPLAY is "unix:0.0" normally.

Note: Various X servers have slightly different requirements, but usually you can use either of the following settings if you are running software on the machine whose monitor you are using:

```
setenv DISPLAY :0.0  
setenv DISPLAY unix:0.0
```

4. If you are logged on to a remote machine, use this DISPLAY setting:

```
setenv DISPLAY mynode:0.0
```

where *mynode* is the name of the system whose monitor you use.

For example, if the software was installed in the /usr/xact directory and you are running on a SPARC, the .login or .cshrc file should contain the following:

```
set path = (/usr/xact/bin/sparc $path)  
setenv XACT /usr/xact  
setenv DISPLAY unix:0.0
```

5. You will also need to execute the following command to allow the remote machine to display graphics on your screen:

```
xhost + hostname
```

The *hostname* is the name of the remote machine you are allowing to write to your display. If you do not specify the host name and you type only xhost+, any host on your network can write to your display screen.

For example, the following syntax allows you to run the software on the host named bigben and to display the graphics on the local monitor of the machine called mynode.

```
setenv DISPLAY mynode:0.0  
xhost + bigben
```

Running Xhost+ on a Client Machine

To run xhost+ on a client machine, follow these instructions.

1. Run xhost+ on the machine whose screen you are using.
2. Execute the following command on the machine you are logged into.

```
setenv DISPLAY hostname:0
```

The *hostname* is the name of the host with the screen.

Interface-Specific Updates to the Configuration File

To configure your workstation to run the Viewlogic or the Mentor Graphics interface software, continue with this section.

Xilinx ABEL Installations

The following three environment variables must be set on the workstation platform for Xilinx ABEL.

```
setenv XABELDEV $XACT/data/lib5
setenv XAPPLRESDIR $XABELDEV
setenv UIDPATH ./%U:$HOME/%U:/usr/X11/lib/X11 \
/uid/%U:$XACT/bin/sparc/%U
```

Viewlogic Interface

Update your .cshrc or .login file by adding the XACT and WDIR environment variables.

1. Set the WDIR environment variable to point to the directory where the Viewlogic message (MSG) files will be installed. Xilinx recommends the following directory:

```
full_path/xact/workview/standard
```

2. Add the directory *full_path*/xact/workview to your path:

```
set path = (full_path/xact/workview $path)
```

3. Set the XACT environment variable to *full_path*/xact:

```
setenv XACT full_path/xact
```

For example, if the software was installed in the `/usr/xact` directory, update your configuration file by adding the following lines:

```
set path = (/usr/xact/bin/sparc $path)  
setenv XACT /usr/xact
```

Mentor Graphics Interface for UNIX Environments

If you have a Sun or an HP workstation with a UNIX environment, configure your `.cshrc` or `.login` file by updating them with the `XACT`, `LCA`, and other environment variables specific to Mentor Graphics.

1. Add the following line to set the `LCA` environment variable:

```
setenv LCA ds344_path
```

where `ds344_path` is the location of your Xilinx Mentor Graphics interface.

2. Add the following line to set the `XACT` environment variable:

```
setenv XACT ds344_path:full_path/xact
```

3. Set the `MGLS_LICENSE_FILE` environment variable to point to the directory where your license is located.

```
setenv MGLS_LICENSE_FILE \  
mentor_license_path/mentor_license_file
```

4. Set the `MGC_WD` environment variable to point to the directory where your design is located.

For example, if your design is in `/home/mentor/work/design`, set the variable as follows:

```
setenv MGC_WD /home/mentor/work/design
```

You need to reset this variable every time you change design directories.

5. Set the optional `MGC_GENLIB` variable, which points to the Mentor generic library.

```
setenv MGC_GENLIB mentor_path/gen_lib
```

6. Set the `MGC_HOME` environment variable to point to where you installed the Mentor Graphics software.

For example, if you installed that software in `/tools/mentor/idea8.4`, set the variable as follows:

```
setenv MGC_HOME /tools/mentor/idea8.4
```

7. Set the `LD_LIBRARY_PATH` as follows:

```
setenv LD_LIBRARY_PATH mentor_path:openwin_path/lib
```

where `mentor_path` is `$MGC_HOME` and `openwin_path` is the location of Openwin.

8. Set the `MGC_LOCATION_MAP` environment variable to point to the location of your `mgc_location_map` file.

For example, if you placed that file in `/home/mentor/work/tools`, set the variable as follows:

```
setenv MGC_LOCATION_MAP \  
/home/mentor/work/tools/mgc_location_map
```

In your `mgc_location_map` file, you must reference `$LCA`; however, do not assign a value to it. The `$LCA` line must appear in the file, followed by a blank line. You can also add soft prefixes in the `mgc_location_map` file to point to your other designs.

For example, you might add the following entry:

```
$ourdesigns  
  
/home/mentor/mygroups/designs
```

This entry allows you to move the specified design among directories without changing any references to those designs. Simply change the path to “`ourdesigns`” in your `mgc_location_map` file.

9. Add the `${LCA}/com/cpu_type` and `${LCA}/bin/cpu_type` directories as well as `${MGC_HOME}/bin` to your path definition.

```
set path = (${LCA}/com/cpu_type \  
${LCA}/bin/cpu_type ${MGC_HOME}/bin $path)
```

The following illustrates how to configure your `.login` or `.cshrc` file for use with the Mentor Graphics interface. This example assumes you installed the Core software in `/group/usr/xact` and the Mentor Graphics interface software in `/group/usr/ds344`.

```
setenv LCA /group/usr/ds344
setenv XACT /group/usr/ds344:/group/usr/xact
setenv MGC_GENLIB mentor_path/gen_lib
setenv MGC_HOME /tools/mentor/idea8.4
setenv LD_LIBRARY_PATH \
${MGC_HOME}:openwin_path/lib
setenv MGLS_LICENSE_FILE \
mentor_license_path/mentor_license_file
setenv MGC_WD /group/usr/design
setenv MGC_LOCATION_MAP \
/group/usr/project/mgc_location_map
set path = (${LCA}/com/cpu_type \
${LCA}/bin/cpu_type ${MGC_HOME}/bin \
/group/usr/xact/bin $path)
```

XSI Environment Variables

To run the XSI software, you must configure your `.cshrc` or `.login` file as described in this section.

1. Include the full path for the XSI executables as follows.

```
set path=(DS-401_v5.2_Dir/bin/platform $path)
```

Substitute *platform* for one of the following: `sparc`, `hppa`, or `rs6000`.

2. Add the full path for the XSI installation directory to the XACT environment variable setting.

Set the following environment variables, depending on your system configuration/setup.

- If DS-401 and XACT 5.2 are installed on the same platform but in different directories.

```
setenv XACT {DS-401_v5.2_Dir} : {XACT_5.2_Dir}
```

- If DS-401 and XACT 5.2 are installed on different platforms.

Enter the following on the DS-401 platform.

```
setenv XACT {DS-401_v5.2_Dir}
```

Enter the following on the XACT 5.2 platform.

```
setenv XACT {XACT_5.2_Dir}
```

3. Set a new environment variable, DS401, to the full path of the XSI installation directory, as follows.

```
setenv DS401 {DS-401_v5.2_Dir}
```

Note: For information on how to set up your Synopsys Startup/Setup files, refer to the “Getting Started” section of the *Synopsys (XSI) for FPGAs Interface/Tutorial Guide* or *Synopsys (XSI) for EPLDs Interface/Tutorial Guide*.

Getting Started & Installation Guide

Using DOS Products

Using DOS Products

If you plan to use *XACTstep* on a PC running DOS only, use the Install program and follow the installation instructions outlined in this appendix. This appendix explains how to install and authorize DOS-only software from DOS and how to run the DOS-based *XACTstep* products from an MS-DOS shell in Windows.

Copying an Individual Product onto a Diskette

You can take an individual product and copy it onto a diskette.

1. Select a product from the following table. Each selection is a text file that includes a list of files to copy and the directory to which you should copy the files.

Table D-1 DOS Files and Installation Directories

Product	Directory
ds290.txt	PROSER
ds35.txt	XACT
ds371.txt	XACT
ds380.txt	XACT
ds390.txt	PROSER
ds391.txt	PROSER
ds502.txt	XACT
ds550.txt	XACT

2. From the C:\ drive, type the following syntax to copy the files for the selected product to the diskette.

```
d:\install product_name destination_path
```

where *product_name* is any one of the products listed in Table D-1 and *destination_path* is your target diskette drive and one of the two possible installation directories in Table D-1.

Installing Software from Diskettes

This section covers installation from diskettes.

1. Check the system requirements defined in the “System Requirements for Xilinx Software” appendix.
2. Insert the CD-ROM or diskette into a drive and determine the source drive letter; for example, D.
3. Type the following syntax from your C:\ drive to install the DOS software to your hard disk drive:

```
mkdir xact
```

```
d:\install product_name destination_path
```

where *product_name* is any one of the products listed in Table D-1 and *destination_path* is your target drive and one of the two possible installation directories listed in Table D-1.

Note: If you have an existing installation in the XACT directory and you have enough space, Xilinx recommends that you install XACTstep to a new directory. This procedure enables you to validate the new installation before removing the old software.

4. Update your configuration file manually with the required environment variables, referring to the “Setting Up Your Environment” appendix for information.
5. Attach the required Xilinx key as described in the “Installing PC Products” chapter, then continue with the next section, “Authorizing Your Software from DOS,” in the current chapter, to authorize your software.

Note: If the key is installed on the same port as an external CD-ROM drive, attach the drive to the port and then the key to the drive.

Authorizing Your Software from DOS

To authorize your software from DOS, you must execute the XKey program from DOS. Use the following instructions to execute XKey.

1. Type the following command:

```
xkey -w
```

This command prompts you for the serial number and passwords.

2. Locate the serial number of the key on its case and enter the serial number and passwords as shown in the following example:

```
C:>xkey -w

xkey [5.2.0] -- Xilinx Automatic CAE Tools
Copyright (c) 1995 Xilinx Inc. All Rights Reserved.

Please enter the key serial number, a hexadecimal number
between 00000000 and FFFFFFFF, inclusive:

> C1234567

Enter password #1:
mjckafjjsgatvhc6qwd4

Enter password #2 (<RETURN> if none):

Password(s) accepted.

Update complete.

Done.
```

Note: XKey input can also be redirected from a file containing three lines of information as follows:

Example of *keyfile.dat* file:

```
C1234567
sd579fgdi6f7fk1kk75h28
```

- The first line of the file should be the key serial number followed by a carriage return.
- The second line of the file should be the Password followed by a carriage return.

- The third line of the file should be a carriage return (no text) if there is no second password.

Example command:

```
C:>xkey -w < keyfile.dat
```

Running DOS Products in an MS-DOS Shell

After completing a product installation from Windows, you can still run the XACTstep products from the DOS command line or from an MS-DOS shell. This section explains how to run DOS products from an MS-DOS shell in Windows.

Using QEMM or HIMEM for Memory Management

HIMEM users must use either the HIMEM.SYS that comes with Windows 3.1 or the HIMEM.SYS that comes with DOS 6.0 or later. Earlier versions of HIMEM.SYS limit the XACTstep 5.2 to 16 MB of RAM.

QEMM users who use QEMM 6.x on PCs with more than 12 MB of installed RAM should load QEMM with the "EMB=<KB installed>" switch to use RAM.

Here is an example line in CONFIG.SYS (for 16 MB).

```
device=c:\qemm\qemm386.sys ram emb=16000
```

Running Windows 3.1 in 386 Enhanced Mode

To run your MS-DOS-based applications in a window, you must use the 386 enhanced mode, which is the default mode.

Type **win** at the MS-DOS prompt to invoke Windows.

Enabling the Virtual Memory Option in Windows 3.1

XACTstep Version 5.2 programs use Windows Virtual Memory if the Virtual Memory option is enabled in Windows. You can either accept the default settings or make selections.

To enable Virtual Memory and change the settings for Drive, Type, and New Size, follow these steps.

1. Open the **Main** program group.

2. Open the **Control Panel** from within the Main program group.
3. Select the **386 Enhanced** icon.
4. In the 386 Enhanced pop-up window, press the **Virtual Memory** button.
5. In the Virtual Memory pop-up window, select the **Change** button and change the amount of virtual memory as suggested in the "Recommended Memory and Swap Space" table in the "System Requirements for Xilinx Software" section.

Opening an MS-DOS Prompt Window

1. In the Main program group, click on the **MS-DOS Prompt** icon.
2. If this action brings up the MS-DOS prompt in full-screen mode, press **Alt-Enter** to switch to an MS-DOS Prompt window.
3. Select the button in the upper-left corner of the MS-DOS Prompt window.
4. Select **Settings** in the pull-down menu.

A pop-up menu with a Tasking Options box opens.

If you want programs to run in the background in this MS-DOS Prompt window, you must select **Background** in the Tasking Options box.

If you do not select Background, any program that you run in the MS-DOS window is suspended when you select any other window (selecting a window puts it in the foreground).

Note: Programs run slower in the background than in the foreground.

Running Graphical Programs in Full-Screen Mode

For graphical programs such as XDM or XDE, you must have the MS-DOS prompt in full-screen mode.

Use **Alt-Enter** to switch between window and full-screen modes.

Getting Started & Installation Guide

Troubleshooting

Troubleshooting

This appendix describes possible errors or problems you might have when installing on personal computers and workstations.

All Systems

This section addresses errors that might happen on all systems.

Insufficient Space for the Installation

The Setup program indicates if sufficient space is not available. If this error occurs, follow these guidelines:

1. Use Custom Install.
2. Select only the product options that you need. Refer to the “Disk Space Management” chapter.
3. Use the Analyze Disk Space and Set Path features in the “Disk Space Management” chapter to control your installation at a detailed level.

Data is Removed from the Installation Directory

Do not use the xinstall directory as your installation directory.

If you did use that directory by mistake, delete the directory and re-install the software.

Mouse Is Incompatible

If your mouse is incompatible with the installation program, use the keyboard commands listed in the following table to navigate and select objects on the screen.

Table E-1 List of Keyboard Commands

Key	Action
Tab	Traverse objects forward and highlight them
Shift-Tab	Traverse objects backward
Enter	- Activate selection button or highlighted list item, including menu items - Highlight list item
Arrow keys	Scroll up or down inside selection boxes, including menus
Alt-Character	Select menu
Esc	-Unselect menu -Exit Help window

PC Installations

This section addresses errors that might happen only on a PC.

You Have Trouble Invoking Install

Specify verbose mode (option `-v`) for more information on the program start-up.

Setup Could Not Update Your AUTOEXEC.BAT File

If Setup could not update your configuration file for you, you must update your AUTOEXEC.BAT file manually before running your software. For information on how to update your configuration file, refer to the "Setting Up the Xilinx Environment" appendix.

Out of Environment Space

There might be an "Out of Environment Space" error message displayed when you boot your PC. In this case, increase your DOS environment space by updating your CONFIG.SYS file as explained in the "Setting Up the Xilinx Environment" appendix.

Problems While Running XACT 5.2 Install from Windows

In general, Xilinx recommends that you do not run `install.exe` from the Program Manager File → Run menu. However, you can run it in a Windows DOS shell. To do so, double-click on the MS-DOS Prompt icon, then invoke the Install program. Also, due to limitations of the MS-Windows emulation software used to create the Install program, Xilinx recommends the following:

- Do not use Alt-Tab to switch to Windows or another application.
- Do not use Alt-Enter to switch to a window and back to a full screen.
- To exit the DOS shell, type `exit` at the prompt.
- Do not move an Install program window off the screen and then back in view.
- Do not click on a button that is not completely displayed.

Dates of the Installed Files Are Off an Hour

If you install software on a network drive, the dates of the files that you installed might be an hour off due to the Daylight Saving Time conversion.

Mouse Fails

The following covers possible solutions for failures you might have with your mouse.

- Your installation program does not have a built-in mouse driver. Make sure the mouse driver that you are using is compatible with MS-Windows. You do not need to have MS-Windows loaded on your PC.
- If you do not have an MS-Windows-compatible mouse, refer to Table E-1 for information on how to enter commands from the keyboard.
- If the `VLPCM` environment variable is set, try resetting it by typing the following:

```
set VLPCM
```

After the installation, this variable is reset when you execute your AUTOEXEC.BAT file.

- If you are using a Logitech mouse, try loading the driver with the Init parameter, for example:

```
c:\mouse\mouse init.↓
```

You can reset the mouse driver after the installation is complete.

- If you are using an old version of a mouse driver, try to upgrade it to an MS-Windows-compatible version.
- If you are using Version 4.55 of the Microsoft mouse driver, you must upgrade it to a later version, because Version 4.55 is incompatible with the installation program.
- Version 5.1 of the Mouse Systems mouse driver, mscmouse.com, is incompatible with the Xilinx installation program.

If you are using this mouse driver, you can get V7.10 of mscmouse.com from the Xilinx Bulletin Board. Download the MSYS7.ZIP file. For instructions on using the Xilinx Bulletin Board (BBS), see *The Programmable Logic Data Book*.

Problems with the PC Keys

If your key is not working, it might be for one of the following reasons:

- Your key is not securely fastened. Check that the key is correctly installed on the parallel port.
- You are using a port that does not conform to the IBM parallel port standard. To diagnose this problem, use the **xkey -r** command. If the key is not found on your PC but can be found on another PC, you are using a non-standard parallel port.
- A printer or CD-ROM drive is attached to the same parallel port as the key. When the printer power is turned off, the key may not function. To correct the problem, either turn on the peripheral or disconnect it from the parallel port. This problem is known to occur on parallel ports using the WINBOND 83757F chip.
- If you are using a Sentinel SuperPro key on the same port as your Xilinx C key, ensure that your Xilinx key is attached after the Sentinel key.

- If you run out of evaluation runs, contact Xilinx to get a password that will authorize your software to run an unlimited number of times.

Graphics Mode Is Not Set

As a default, the graphics mode is set to 4-color VGA. To change the graphics mode, add the GRMODE environment variable to the AUTOEXEC.BAT file, as explained in the “Setting Up the Xilinx Environment” appendix.

Program Icons Were Not Created By Setup

If the Xilinx Setup program did not create a program group for your Windows tools and program icons for each individual tool, use the following instructions to create program groups and icons for products you have installed.

1. Invoke Windows as follows:

win ↵

2. Select **File** → **New** from the Program Manager.

The New Program Object dialog box is displayed, as shown in Figure E-1.

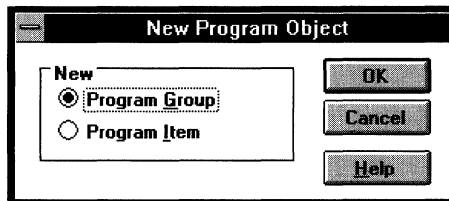


Figure E-1 New Program Object Dialog Box

3. Select the **Program Group** option and click on the **OK** button.

The Program Group Properties dialog box is displayed, as shown in Figure E-2.

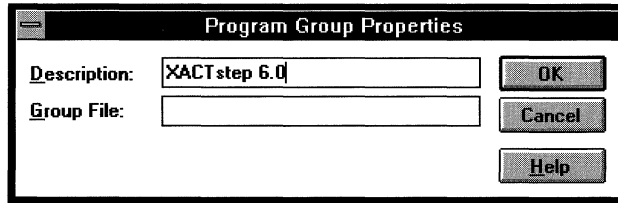


Figure E-2 Program Groups Properties Dialog Box

4. Type **XACTstep 6.0** in the Description box.
5. Leave the Group File text box blank.
6. Click on the **OK** button.

A new program group box, labeled *XACTstep 6.0*, appears on your screen.

Follow these instructions to create a program icon for the *XACTstep* Version 6.0 software tools.

1. Select **File** → **New** from the Program Manager.

The New Program Object dialog box is displayed, as shown in Figure E-3.

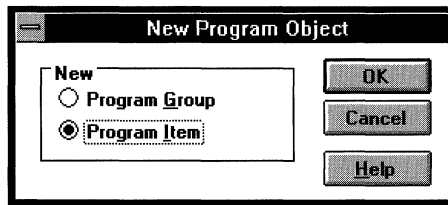


Figure E-3 New Program Object Dialog Box

2. Select the **Program Item** option and click on the **OK** button.

The Program Item Properties dialog box is displayed, as shown in Figure E-4.

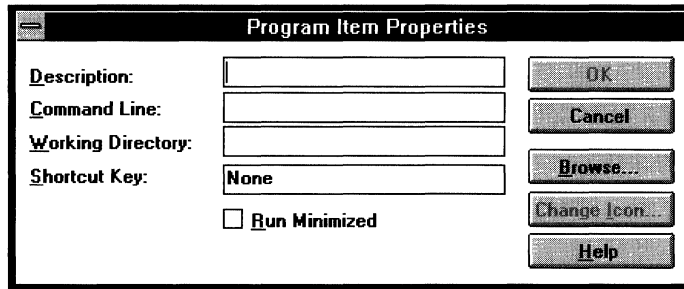


Figure E-4 Program Item Properties Dialog Box

3. Type the name of the program you want in the Description box:
 - Design Manager
 - Floorplanner
 - Timing Analyzer
 - Hardware Debugger
 - PROM File Formatter
4. From Table E-2 below, select the path corresponding to the program icon you want to create. The table assumes the software is installed in c:\xact.

Table E-2 Program Paths

Program Description	Path	Working Directory
Design Manager	c:\xact\dsgnmgr.exe	drive:\xactuser
Floorplanner	c:\xact\fplan.exe	drive:\xactuser
Timing Analyzer	c:\xact\timingan.exe	drive:\xactuser
Hardware Debugger	c:\xact\hwdebugr.exe	drive:\xactuser
PROM File Formatter	c:\xact\promfmtr.exe	drive:\xactuser

5. Type the selected path in the Command Line text box.
6. Select the following working directory:

c:\xactuser

Note: The working directory can be any directory you want, but the XACTUSER variable must point to it in your AUTOEXEC.BAT file.

7. Leave the Shortcut Key text box blank.

Figure E-5 shows the filled dialog box used to create the Design Manager icon.

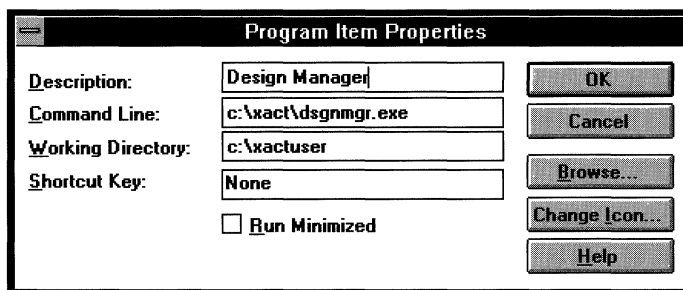


Figure E-5 Creating the Design Manager Icon

8. Click on the **OK** button.

A new program item, with the program name you specified, appears within the XACTstep Version 6.0 program group box as illustrated in Figure E-6.



Figure E-6 Design Manager Icon

Workstation Installations

This section addresses errors that might happen only on workstations.

Starting Install Generates Warning Messages on HP-PA Systems.

When you start the installation program on an HP-PA system, ignore the warning messages that are initially displayed.

Incompatibility Between HP-PA and Sun Workstations

You cannot run the Install program on an HP-PA by setting the DISPLAY variable to a Sun workstation that is running OpenWindows because of an incompatibility between X11R5 used by the HP-PA machine and the Sun OpenWindows XServer. This incompatibility causes the Sun Window Manager and the XServer to crash. Normally, any processes running in the windows of that display terminate.

Server Start-up Problems

Check the license manager activity by using the Xlmllog program to report server startup messages. Start this program before starting the license server. To use this program, enter the following:

```
xlmllog -l
```

Xlmasu Failed

If Xlmasu fails, the following messages are displayed:

```
xlmasu@zeppo: Xilinx License Manager Autostartup Version #V#
xlmasu@zeppo: License file: /home/venus/xact/license/
license.dat
xlmasu@zeppo: License manager servers will be started on
zeppo
xlmasu@zeppo: Server initialization waiting period started
xlmasu@zeppo: License manager servers could not be started on
zeppo
xlmasu@zeppo: Confirming the status of the servers
xlmasu@zeppo: License manager servers could not be started on
zeppo
xlmasu@zeppo: terminated abnormally
```

Zeppo is the name of the license server machine, and /home/venus/xact is the installation directory.

The cause of this error can be any of the following:

- You cannot write into the \$XACT/license directory.

- You cannot use “rsh” (or “/com/crp” for Apollo, or “remsh” for Hppa) commands to the license server machine.
- The Xlmasu program is found in your path somewhere other than in \$XACT/bin/sparc. The Xilinx license manager programs look for the license file by assuming that they are in \$XACT/bin/*cpu_type* and looking for ../../license/license.dat.

The \$XACT/license/README file has more information about the new licensing implementation.

The licensed programs expect that the license file is \$XACT/license/license.dat and that the programs are in \$XACT/bin/*cpu_type*.

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