XILINX®

Release Document

Alliance Series 1.5 Install and Release Document

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Read This Before Installation

Alliance Series 1.5 Install and Release Document

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Conventions

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

- `Courier font` indicates messages, prompts, and program files that the system displays.

  ```
  speed grade: -100
  ```

- **`Courier bold`** indicates literal commands that you enter in a syntactical statement. However, braces "{ }" in Courier bold are not literal and square brackets "[ ]" in Courier bold are literal only in the case of bus specifications, such as bus [7:0].

  `rpt_del_net=`

  `Courier bold` also indicates commands that you select from a menu.

  `File` → **`Open`**

- *Italic font* denotes the following items.
  - Variables in a syntax statement for which you must supply values

    `edif2ngd` *design_name*

  - References to other manuals

    See the *Development System Reference Guide* for more information.

  - Emphasis in text

    If a wire is drawn so that it overlaps the pin of a symbol, the two nets are *not* connected.

- Square brackets "[ ]" indicate an optional entry or parameter. However, in bus specifications, such as bus [7:0], they are required.

  `edif2ngd` [*option_name*] *design_name*

  Square brackets also enclose footnotes in tables that are printed out as hardcopy in DynaText®.

- Braces "{ }" enclose a list of items from which you must choose one or more.

  `lowpwr =`{**`on`**|**`off`**}

- A vertical bar " | " separates items in a list of choices.

  `lowpwr =`{**`on`**|**`off`**}

- A vertical ellipsis indicates repetitive material that has been omitted.

  ```
  IOB #1: Name = QOUT'
  IOB #2: Name = CLKIN'
  .
  .
  .
  ```

- A horizontal ellipsis ". . ." indicates that an item can be repeated one or more times.

  `allow block` *block_name loc1 loc2 . . . locn;*

Chapter 1

Introduction

This document explains how to install Xilinx Alliance Series™ 1.5 software and how to configure your system for use with the Xilinx Design Implementation Tools. The release notes also detail the new features and support for software from Xilinx third-party (CAE) vendors, as well as providing installation instructions for CAE libraries.

This book describes how to install and use the Xilinx online documentation, which is implemented in SGML (Standard Generalized Markup Language). Furthermore, this document provides information on technical support, troubleshooting, new features, and known issues of the release.

This chapter lists the contents of your package and provides user guidelines for the software installation and registration process.

The following sections are in this chapter.

- "Contents of this Release"
- "User Guidelines"
- "GNU License Agreement"

Contents of this Release

The Xilinx Development System software and online documentation is provided on five CD-ROMs. The CD names are as follows.

- Alliance Series 1.5 Design Implementation Tools-PC
- Alliance Series 1.5 Design Implementation Tools-Solaris
- Alliance Series 1.5 Design Implementation Tools-HP
- Alliance Series 1.5 CAE Libraries
- Alliance Series 1.5 Documentation

The Xilinx CORE Generator CD-ROM and the Model Technology (MTI) ModelSim™ Evaluation CD-ROM are also included with this release. These CD-ROMS are separately packaged in their own case, and they include their own installation instructions.

Software Contents

The general contents of this release are listed in this section. The following table lists the contents of the Design Implementation Tools CD-ROM.

Table 1-1 Design Implementation Tools CD-ROM(s) Contents

Software Component	UNIX	PC
Installation program	●	●
Alliance Design Implementation Tools	●	●
Version 3.1 DynaText® browser	●	●
Answers Book for Alliance 1.5	●	●
Alliance Series Tutorials	●	●
Userware files and Utilities	●	●

Make sure to use the appropriate Design Implementation Tools CD-ROM, depending on your platform type. The following table lists the contents of the Documentation CD-ROM.

Table 1-2 Online Documentation CD-ROM Contents

Software Component	UNIX	PC
Installation program	●	●
DynaText Browser, version 3.1	●	●
Xilinx Online Documentation	●	●
DynaText Online Documentation	●	●

The following table lists the contents of the CAE Interface CD-ROM.

Table 1-3 CAE Interface CD-ROM Contents

CAE Vendor/Interface Library Version	UNIX	PC
Viewlogic/ Workview Office 7.4		●
Viewlogic/Powerview 6.0	●	
Mentor Graphics/ Falcon C.1	●	
Synopsys/FPGA Express 1997.08		●
Synopsys/ FPGA Compiler 1997.02	●	
Synopsys/ Design Compiler 1998.01	●	
Cadence/ Concept 97A	●	
Cadence/Verilog-XL 97A	●	

The following table lists the contents of the Xilinx CORE Generator CD-ROM. For a description of the Xilinx CORE Generator, see the "Features in This Release" chapter.

Table 1-4 CORE Generator CD-ROM Contents

Software Component	UNIX	PC
Installation program	●	●
Xilinx CORE Generator	●	●
Adobe Acrobat Reader™	●	●
CORE Generator Online Documentation	●	●

Note: The CORE Generator documentation is implemented in .pdf file format. You need to have the Adobe Acrobat Reader software installed on your system in order to read the documentation

The following table shows the contents of the Model Technology (MTI) ModelSim Evaluation CD-ROM.

Table 1-5 MTI CD-ROM Contents

Software Component	UNIX	PC
Installation program	●	●
Libraries for ModelSim 4.6h	●	●

Xilinx Documentation

The DynaText browser is used to view the Xilinx online book collection. The documentation CD-ROM contains the Xilinx documentation, DynaText documentation, and the DynaText browser. The browser is also included on the Design Implementation Tools CD-ROMs. When you have installed the online browser, you can select specific books to install, or instead read the books directly from the Documentation CD-ROM.

Note: You need to install the DynaText 3.1 browser in order to read the Xilinx online documentation for the Alliance 1.5 release.

The following online documentation books are included with the Xilinx Alliance Series 1.5 software. Descriptions of each book are in the "Getting Started" chapter.

- *Alliance Series Quick Start Guide*
- *Development System User Guide*
- *Hardware User Guide*
- *Constraints Editor User Guide (Beta Version Document)*
- *Cadence® Interface/Tutorial Guide*
- *Mentor Graphics® Interface/Tutorial Guide*
- *Viewlogic® Interface/Tutorial Guide*
- *Synopsys® (XSI™) Interface/Tutorial Guide*
- *Development System Reference Guide*
- *JTAG Programmer Guide*

- *Design Manager/Flow Engine Reference/User Guide*
- *EPIC Design Editor Reference/User Guide*
- *LogiBLOX™ Reference/User Guide*
- *Floorplanner Reference/User Guide*
- *Hardware Debugger Reference/User Guide*
- *Timing Analyzer Reference/User Guide*
- *PROM File Formatter Reference/User Guide*
- *CPLD Schematic Design Guide*
- *CPLD Synthesis Design Guide*
- *Libraries Guide*

To order other printed books, such as the *Simulation and Synthesis Design Guide* and the *Synopsys (XSI) HDL Synthesis and Simulation Design Guide*, use the order sheet that is provided inside your software package.

Note: The *Alliance Answers for 1.5* online book is only included on the Design Implementation Tools CD-ROM. The book contains a list of the known issues and workarounds at the time of the release. See the Xilinx web site at http://www.xilinx.com for the latest tips and workarounds.

You also have access to DynaText's own online documentation collection, which explains how to use the DynaText browser to view online documents. For more information, see the "Instruction Manuals for DynaText Users" section of the "Getting Started" chapter.

Online Help

Context-sensitive online help is available for all Xilinx programs that are available with a GUI (Graphical User Interface). Each GUI has its own help file that is invoked by that particular program.

Note: Each help file contains two topics, "How to Use Help," and "Obtaining Help," that you can refer to if you need detailed information about how to use the online help system.

User Guidelines

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

1. Fill out the enclosed registration card.

   Fax or mail the card to Xilinx to receive future software updates and product information.

2. Read this release document. Make sure to check the "System Requirements" chapter for operating system and disk space requirements. Refer to the "Known Issues" chapter for workarounds to problems you could encounter during installation.

Note: For the 1.5 Release, the contents of the Design Implementation Tools CDs have been compressed. The appropriate files will be uncompressed during the installation process.

3. Install your Alliance Series Design Implementation Tools Software.

   Follow the instructions for your platform in these release notes to install your software.

   Refer to the "Installing Alliance on Workstations" chapter or the "Installing Alliance on PCs" chapter.

4. Install CAE tool interfaces software.

   Refer to the "Installing Alliance on Workstations" chapter or the "Installing Alliance on PCs" chapter.

5. Install the Xilinx documentation and online browser.

   You must use the DynaText browser to read Xilinx online documentation.

   The browser can be installed from the Alliance Series Documentation CD-ROM or the Design Implementation Tools CD-ROM. The online books are only located on the Documentation CD-ROM.

   You can install selected books onto your system, or read the online books directly from the Documentation CD-ROM.

6. Install the Xilinx CORE Generator (optional)

   The CORE Generator CD-ROM is provided along with the Alliance software. Installation instructions are provided in the "Installing Alliance on PCs" chapter and the "Installing Alliance on Workstations" chapter.

7. Set up your environment variables.

   Refer to the "Installing Alliance on Workstations" chapter or the "Installing Alliance on PCs" chapter.

8. Address your questions and comments to the numbers shown in the "Xilinx Customer Support Information" chapter.

9. Start your Alliance 1.5 software.

   Refer to the appropriate sections in the "Getting Started" chapter.

GNU License Agreement

Xilinx distributes the Perl program with the Alliance software. Perl, which is used for the installation of software, is copyright (c) 1989, 1991 Free Software Foundation, Inc., and is distributed without warranty of any kind pursuant to the GNU General Public License Agreement, a copy of which is available from Xilinx upon your request. For three years following your acquisition of the Perl program along with Xilinx's Alliance software, Xilinx will supply a copy of the Perl source code upon your request to Xilinx Customer Support.

Chapter 2

Features in This Release

This chapter describes the new features of this software release and the new Xilinx devices that are supported by the software. New features of the Xilinx-Synopsys Interface (XSI) and Viewlogic interface are also described. The following sections are in this chapter.

- "Alliance Software Series 1.5 Features"
- "Xilinx Devices"
- "Xilinx CORE Generator"
- "Xilinx Synopsys Interface (XSI) Features"
- "Xilinx Viewlogic Interface Features"

Alliance Software Series 1.5 Features

Following are the new features that are supported for this release.

- Security Licensing Eliminated

  The FLEXlm Software security licensing for both Base and Standard users has been replaced by a numbered CD key. The key is used for software installation; a sticker with your key number is located on the back of your Design Implementation Tools CD-ROM.

  You no longer need to call Xilinx to obtain registration numbers for installation. Furthermore, you no longer need to set up the LM_LICENSE_FILE environment variables in order to run Alliance software.

- Runtime Improvements

  Runtime throughout the system has ben improved dramatically. You will notice the biggest decrease in the timing-driven place and route times, but there are also six to ten times faster runtimes

in the design translation and back-annotation programs. In addition, there are new timing analysis algorithms that easily handle the growing number of timing paths associated with larger designs.

- Constraints Editor GUI (Graphical User Interface)

  Now you can enter timing and physical constraints using a graphical user interface. Timing constraints and I/O pin locations can quickly and easily be specified for any design. You can control your constraints entry process without needing to know the constraint language syntax.

Note: The Constraints Editor is not currently supported for HP operating systems. Refer to the Xilinx ftp site at http://www.xilinx.com in order to download software performance packs as they become available.

- Floorplanner

  A Floorplanner tool with a graphical user interface (GUI) is now available for the Spartan/XL and XC4000E/EX/XL/XLA/XV families. Both detailed placement and area-based floorplanning can be accomplished using this program.

- New LOGIBlox Features

  The LOGIBlox application is now supported for the XC9500/XL and Spartan/XL device architectures.

  The Memories module now gives you a choice of Multiplexer Style. You can choose from Maximum Speed, Normal Gates, and Wired AND.

  RPM support has been added to the following three modules.

  - RAM and ROM memories
  - Data Registers

Program Behavior Changes For 1.5

The following section describes program behavior changes for this release.

- Automatic Pin-Locking

I/O pins can now be locked to a previous revision by simply selecting the revision in the Design Manager and choosing the "Lock Pins" command.

- Minimum Path Delay Reports for the Timing Analyzer

  You can now get a minimum delay report from the Timing Analyzer program (trce) or the simulation back-annotation programs for the XC4000XL family. Support for other families will be provided through software updates, which are available on the Xilinx web site. The web site address is http://www.xilinx.com.

- Temperature and Voltage Prorating

  New temperature and voltage settings can now be used to specify the true operating environment of the FPGA. Circuit performance can be substantially improved in a controlled environment, compared to general worst-case commercial ranges.

- PROHIBIT Property for CPLD Designs

  The PROHIBIT property now supports FPGAs and CPLDs. Using the PROHIBIT property, you can specify I/O Pins on CPLD devices to be reserved for particular functions. You can enter these restrictions in three different ways; in your design file, your contsraints file, or through the Constraints Editor GUI.

- New Timing Constraints

  - TNM_NET

    This constraint solves the problems associated with clock names changing when a design is re-synthesized. It can be placed on the clock pad itself. The clock pad's name will not change.

  - OFFSET

    This constraint now has a global capability to specify the input setup time of all I/Os associated with a specific clock and a single restraint. The OFFSET constraint can also be used to specify all clock to output paths. OFFSET now accepts timegroups for registers and pads, allowing for the creation of fewer total constraints.

  - PERIOD

PERIOD constraints can now be qualified with timegroups. Clock Skew is now taken into account when running timing analysis and timing driven place and route.

- PAR (Place and Route) report improvements

  PAR now produces a timing constraint summary report upon the completion of place and route. In addition, a detailed report will automatically be produced by the timing tools for any constraints that have not been met. The PAD report had been improved to include special purpose pins on the device, such as VCC, GND, and BSCAN.

- BitGen Changes

  A new checksum and CRC will be generated for XC4000X family designs run through the Alliance 1.5 BitGen software program. Though the numbers will be different than those generated with identical designs run on previous releases of Alliance software, this feature change will have no effect on your designs.

- LOGIBlox Changes

  The implementation netlist extension has been changed from .ngo to .ngc. For more information, see the "" section of the "Known Issues" chapter.

Items Not Supported In This Software Release

- The netlist output program NGD2XNF is no longer supported.
- The UNIX operating system SunOS is no longer supported.
- LOGIBlox does not support Virtex devices.

Xilinx Devices

The following devices are supported in this software release. An asterisk "*" marks new device families in this release.

- XC3000 A/L
- XC3100 A/L
- XC4000 E/L/EX/XL/XV*/XLA*
- XC5200
- XC9500/XL*
- Spartan/ XL*

  Spartan devices have an XCS prefix, and SpartanXL devices have an XCS*nnnn*XL nomenclature.

- Virtex*

  Virtex devices have an XCV prefix.

- 5V and 3V SPROM devices

Note: Please refer to the "Device and Package Support" chapter for a detailed list of packages and speed grades for each device.

Virtex Devices and Support

The Virtex device family is supported with a library in Alliance 1.5. The library is targeted to a synthesis-based flow. Schematic capture libraries for the Virtex library will be supported under Mentor, Cadence Concept, and Viewlogic. See the Virtex area on the Xilinx web site for more information.

The Virtex family supports the EDIF netlist input format. Virtex does not support XNF for back-annotation. Design download is supported through the Hardware Debugger software, and readback is supported through the JTAG Programmer software. Bitgen and Logi-BLOX are not currently supported for Virtex devices. However some Xilinx cores (available on your CORE Generator CD-ROM) can be used with Virtex devices.

Device and software updates will be delivered to you in Xilinx Performance Packs. You can also check the Xilinx web site at http://www.xilinx.com for the latest product information.

Devices Not Supported In This Software Release

- XC40125XV
- XQ4000XL

  The XQ4000XL family is available for purchase, but is not currently supported by the Alliance software. The speed files for the XQ4000XL family are the same as the XC4000XL devices.

  This high-reliability device family is specifically geared toward Military and Aerospace applications. The silicon has been back-end tested and processed to adhere to Military specifications.

Xilinx CORE Generator

The Xilinx CORE Generator is an easy to use design tool that delivers parameterizable cores, optimized for Xilinx FPGAs.

The CORE Generator library includes cores as complex as DSP filters and multipliers, and as simple as delay elements. You can use these cores as building blocks in order to complete your designs more quickly. The cores have been completely tested for compatibility with Alliance 1.5 Software.

The Xilinx CORE Generator CD-ROM has been included with your Alliance 1.5 Series Software contents. You will find the CD-ROM in its own case, along with installation instructions on the case cover.

Installation instructions are also inlcuded in this document, in the "Installing Alliance on Workstations" and "Installing Alliance on PCs" chapters. The "Getting Started" chapter includes instructions on how to start the CORE Generator software interface and access the documentation.

Xilinx Synopsys Interface (XSI) Features

The following section describes the new XSI features for Alliance Series 1.5.

The XSI now supports the FPGA Compiler II. The nomenclature for this software has changed; the current release of the product is known as the FPGA Compiler 1998.02. The compiler has the same interface compatibility as previous versions of Alliance software, but now includes new libraries for use with the 1.5 software.

The FPGA Express software (now version 2.0+) is supported for the workstation in Alliance 1.5. This software offers a new engine especially for FPGAs. The FPGA Express and FPGA Compiler software will eventually be merged into one product, supported for the workstation.

Note: The initial release of the A1.5 XSI will not include synthesis libraries for the SpartanXL, XV, and XLA families. You can place and route for these families in A1.5.

If you would like to synthesize with FPGA Compiler/Design Compiler a SpartanXL, XV, or XLA design, use the closest equivalent to your XC4000XL .db files.

Xilinx Viewlogic Interface Features

The Viewlogic libraries for Spartan and SpartanXL are available for schematic capture and simulation. The Viewlogic library for Virtex is available for schematic capture only. Virtex simulation is available with VHDL and Verilog simulators.

The .ngo file is enabled in the Viewlogic Logiblox GUI for VHDL and Verilog designs. Please continue to use the .edif file format for Viewlogic schematic designs.

Please contact Viewlogic Customer Services to receive a Workview Office license file or for any issues regarding licensing.

Chapter 3

System Requirements

This chapter gives the operating system, equipment, and disk space requirements needed to install and use the Alliance Series 1.5 software. The RAM and swap space requirements for each device family are also included. The following sections are in this chapter.

- "Operating System Compatibility"
- "Equipment and Permissions"
- "System Memory Requirements"
- "Alliance Series 1.5 Installation Requirements"
- "Online Documentation Installation Requirements"
- "CAE Interface Installation Requirements"
- "CORE Generator Installation Requirements"

Operating System Compatibility

The Alliance 1.5 software supports several different operating systems, as shown in the following table.

Platform Type	Version Number
Solaris	Solaris 2.5 (5.5 and 5.5.1)
HP Series 9000	HP-UX 10.1 and 10.2
Windows NT	NT 4.0/95
Japanese Windows	NT/95
Chinese Windows	95
Korean Windows	95
NEC Operating System	NEC98

Note: SunOS platforms are no longer supported in the Alliance 1.5 release.

Note: The AIX RS6000 platform will be supported in Alliance 1.5 through a performance pack software update.

Equipment and Permissions

The following section provides information about related equipment, permissions, and network connections that you will need to use this software.

- **Directory Permission**

  Write permissions must exist for all directories containing design files to be edited.

- **Hardware Components**

  Xilinx recommends that PC users have an IBM- compatible Pentium class machine, although a 486 machine is acceptable.

  UNIX workstation users should have a Sun SPARCstation or a HP/UX machine. Make sure you are running the X Window System Version X11R4 (or compatible) and the OSF or Motif 1.1 window manager.

- **Monitor**

  Color VGA operating at one of these modes:

  Minimum Resolution -- 640 x 480
  Minimum Recommended -- 1024 x 768

- **Mouse**

  PC users should have a 2-button (Microsoft Windows compatible) or 3-button (Microsoft Windows compatible) mouse. UNIX workstation users should have a 3-button mouse.

- **CD-ROM Drive**

  You should have an ISO9660 compliant on your system.

- **Ports**

  You should have two ports (one for a mouse and one parallel port for the parallel download cable, if needed).

- **Network Compatibility**

The Xilinx installation program supports TCP-IP networks. If you are using a Windows NT operating system, then the TCP-IP protocol needs to be installed first. For more information, see the *Xilinx Answers* book, number #2510.

System Memory Requirements

This section gives the RAM and swap space needed in order to install Alliance Series 1.5 on your system.

While the following table indicates the system requirements for typical designs, the unique characteristics of each individual design will affect the actual system resources required. Additional memory may be required for certain "boundary-case" or "pathological" designs, as well as for concurrent operation of other applications.

Some designs can be implemented using less than the specified memory while other complicated or large designs may require additional memory. It is recommended that each designer monitor the system resources being utilized and adjust the systems resources if necessary.

The following two tables give the memory requirements for PCs and Workstations.

Table 3-1 Memory Requirements for PCs

Xilinx Device	RAM	Virtual Memory
XC3000A/L XC3100A/L XC4003E/L through XC4008E/L XC4005XL through XC4008XL XC5202 through XC5210 XC9536 through XC95216 XC9536XL through XC95216XL	32 MB	32 MB–64 MB
XC4010E/L through XC4025E/L XC4028EX through XC4036EX XC4010XL through XC4028XL XC4085XL XC4013XLA through XC4028XLA XC5215 Spartan/XL XC95288/XL	64 MB	64 MB–128 MB
XC4036XL through XC4062XL XC4036XLA through XC4085XLA	128 MB	128 MB–256 MB
XC40110XV, XC40150XV XCV50, XCV100, XCV150, XCV200, XCV300	128 MB	256 MB
XC40200XV, XC40250XV XCV400, XCV600	256 MB	400 MB
XCV800, XCV1000	512 MB	800 MB

If your virtual memory is running out during installation, the following message displays:

```
System Process - Out of Virtual memory. Your system is
running low on virtual memory. Please Close some
applications. You can then start the system option in
the Control Panel and choose the Virtual Memory button
to create an additional paging file or to increase the
size of your current paging file.
```

Note: If you are using Windows NT or a workstation, you must have Administrator permissions to alter the paging file.

The following table gives the memory requirements for workstations.

For workstation users, Xilinx recommends that 4000EX designs be compiled using an Ultra Sparc, HP715, or equivalent machine type. 64 MB of RAM as well as 64 MB of swap space is required to compile 4000EX designs, but Xilinx recommends that 128 MB of RAM, plus corresponding swap space, be used.)

Table 3-2 Memory Requirements for Workstations

Xilinx Device	RAM	Swap Space
XC3000A/L XC3100A/L XC4000E/L XC4028EX through XC4036EX XC4005XL through XC4028XL XC4013XLA through XC4028XLA XC5200 Spartan/XL XC9500/XL	64 MB	64 MB–128 MB
XC4036XL through XC4062XL XC4036XLA through XC4062XLA XCV50 through XCV300	128 MB	128 MB–256 MB
XC4085XL/XLA XC40110XV through XC40150XV XCV400 through XCV600	256 MB	400 MB
XC4020XV through XC40250XV XCV800 through XCV1000	512 MB	800 MB

Alliance Series 1.5 Installation Requirements

The following tables detail the disk space needed for installation of various components of the Alliance Series 1.5 Design Implementation Tools. All sizes are approximate, and are given in megbytes (MB).

Each device name and its family are listed, along with separate columns for each operating system. In the tables, "Sol" refers to the Solaris operating system from Sun Microsystems, and "HP" refers to

the Hewlett Packard platform. The Windows 95 and NT platforms have the same disk space requirements.

The figures given are a combination of the $XILINX/bin and $XILINX/data directories, which are created or updated during installation. If you install more than one platform, the data directory is only installed once.

Several of the device families and installation options include sub-components. During the installation program you have the choice to select or de-select all components and sub-components. All file sizes are approximate

The following table lists the disk space requirements for Alliance 1.5 Standard package users.

Table 3-3 Alliance Standard Package Disk Space Requirements

Component Name	95/NT	Sol	HP
Program Executables[1]	~81.9	~132	~150
Network Installation Files[2]	~0.9	~2	~2
Viewlogic Viewlogic Executables XC3000, XC3100 device files XC4000L device files XC4000E device files XC4000EX/XL/XV device files XC5200 device files XC9500/XL device files Spartan device files Spartan XL device files Virtex device files	~23.5 (all) ~1.1 ~1.8 ~2.6 ~2.7 ~2.8 ~2.4 ~2.2 ~2.6 ~2.8 ~2.0	Sizes Not Available	Sizes Not Available
XC3000A	~7.1	~4	~4
XC3000L	~8.3	~2	~2
XC3100A	~12.7	~4	~4
XC3100L	~13.8	~2	~2
XC4000E XC40003E/5E/6E/8E/10E XC4013E XC4020E/4025E	~30.1 (all) ~13.9 ~3.3 ~7.65	~6 ~15 ~4 ~8	~13 ~15 ~4 ~8

Table 3-3 Alliance Standard Package Disk Space Requirements

Component Name	95/NT	Sol	HP
XC4000L	~10.0 (all)	~1	~1
XC40005L, XC4010L	~2.8	~1	~1
XC4013L	~1.9	~1	~1
XC4000EX	~21.9 (all)	~4	~6
XC4028EX	~6.6	~7	~7
XC4036EX	~7.43	~8	~8
XC4000XL	~105.6(all)	~4	~5
XC40002XL, XC40005XL, XC4010XL, XC4013XL	~27.3	~29	~29
XC4020XL, XC4028XL, XC4036XL, XC4044XL	~28.9	~30	~30
XC4052XL, XC4026XL, XC4085XL	~37.9	~39	~39
XC4000XV	~128.5(all)		
XC40110XV, XC40150XV	~45.3	~47	~47
XC4020XV, XC4025XV	~69.9	~72	~72
XC4000XLA	~81.2 (all)	~123	~123
XC4013XLA, XC4020XLA, XC4028XLA	~18.2	~19	~19
XC4036XLA, XC4044XLA	~15.7	~17	~17
XC4052XLA, XC4062XLA, XC4085XLA	~31.8	~33	~33
XC5200	~11.8 (all)	~4	~8
XC5202/04/06/10	~8.7	~6	~6
XC5215	~2.1	~4	~4
XC9500/XL	~ 0.9	~1	~1
Spartan	~11.6 (all)	~1	~1
XCS05, XCS10	~2.6	~2	~2
XCS20, XCS30, XCS40	~2.9	~3	~3
Spartan XL	~28.7 (all)	~1	~2
XCS05, XCS10	~4.9	~6	~6
XCS20, XCS30, XCS40	~10.0	~11	~11

Table 3-3 Alliance Standard Package Disk Space Requirements

Component Name	95/NT	Sol	HP
Virtex	~205.7(all)	~13	~17
XCV50, XCV100, XCV150	~26.7	~28	~28
XCV200, XCV300	~29.4	~31	~31
XCV400	~22.8	~24	~24
XCV600	~31.0	~32	~32
XCV800	~40.4	~42	~42
XCV1000	~51.3	~53	~53
Online Documentation Viewer (DynaText)[3]	~15.2		
Support Files	~44.8 (all)		
Tutorials	~11	~1	~1
Answers Book	~6.9	~11	~18
Training Files and Userware	~7	~6	~11

[1] The "Program Executables" component includes all of the implementation executable programs along with the data files and libraries associated with them.

[2] The "Network Installation Files" component installs the root files needed to run the software on your network.

[3] You must install the DynaText browser in order to read the Xilinx online documentation. The browser can also be installed from the Documentation CD-ROM.

The following table lists the disk space requirements for Alliance Base package users.

Table 3-4 Alliance Base Package Disk Space Requirements

Component Name	95/NT	Sol	HP
Program Executables[1]	~81.9	~132	~150
Network Installation Files[2]	~0.9	~2	~2

Table 3-4 Alliance Base Package Disk Space Requirements

Component Name	95/NT	Sol	HP
Viewlogic	~23.5 (all)	Sizes	Sizes
Viewlogic Executables	~1.1	Not	Not
XC3000, XC3100 device files	~1.8	Available	Available
XC4000L device files	~2.6		
XC4000E device files	~2.7		
XC4000EX/XL/XV device files	~2.8		
XC5200 device files	~2.4		
XC9500/XL device files	~2.2		
Spartan device files	~2.6		
Spartan XL device files	~2.8		
Virtex device files	~2.0		
XC3000A	~7.1	~4	~4
XC3000L	~8.3	~2	~2
XC3100A	~12.7	~4	~4
XC3100L	~13.8	~2	~2
XC4000E	~30.1 (all)	~6	~13
XC40003E/5E/6E/8E/10E	~13.9	~15	~15
XC4000L	~10.0 (all)	~1	~1
XC40005L, XC4010L	~2.8	~1	~1
XC4000XL	~105.6(all)	~4	~5
XC40002XL, XC40005XL, XC4010XL	~27.3	~29	~29
XC5200	~11.8 (all)	~4	~8
XC5202/04/06	~8.7	~6	~6
XC5210	~2.1	~4	~4
XC9500/XL	~ 0.9	~1	~1
Spartan	~11.6 (all)	~1	~1
XCS05, XCS10	~2.6	~2	~2
XCS20, XCS30, XCS40	~2.9	~3	~3
Spartan XL	~28.7 (all)	~1	~2
XCS05, XCS10	~4.9	~6	~6
XCS20, XCS30, XCS40	~10.0	~11	~11

Table 3-4 Alliance Base Package Disk Space Requirements

Component Name	95/NT	Sol	HP
Online Documentation Viewer (DynaText)[3]	~15.2		
Support Files	~44.8 (all)		
Tutorials	~11	~1	~1
Answers Book	~6.9	~11	~18
Training Files and Userware	~7	~6	~11

[1] The "Program Executables" component includes all of the implementation executable programs along with the data files and libraries associated with them.

[2] The "Network Installation Files" component installs the root files needed to run the software on your network.

[3] You must install the DynaText browser in order to read the Xilinx online documentation. The browser can also be installed from the Documentation CD-ROM.

CAE Interface Installation Requirements

The following table gives the disk space needed to install libraries and components of the CAE interface CD-ROM. All sizes are approximate, and are given in megabytes (MB). The sizes given are for Solaris and HP systems; Windows systems will vary slightly.

Vendor Library	Supported Xilinx Device Family	Disk Space (UNIX)
Synopsys Libraries	Executable Files	~50
	Spartan	~7
	Virtex	~3
	XC3000	~8
	XC4000E	~13
	XC4000EX	~26
	XC5200	~10
	XC9000	~4

Vendor Library	Supported Xilinx Device Family	Disk Space (UNIX)
Mentor Libraries	Executable Files	~17
	Spartan	~11
	SpartanXL	~12
	Virtex	~15
	XC3000	~11
	XC4000E	~11
	XC5200	~9
	XC9000	~9
Viewlogic Libraries	Executable Files	~ 11
	Spartan	~3
	SpartanXL	~3
	Virtex	~3
	XC3000	~2
	XC4000E	~6
	XC4000EX	~3
	XC5200	~3
	XC9000	~3
Cadence Libraries	Executable Files	~15
	Spartan	~22
	SpartanXL	~23
	XC3000	~17
	XC4000EX	~23
	XC4000E	~23
	XC5200	~21
	XC9000	~20

Note: If you are using a CAE interface tool, see the "Vendor Versions and Compatibility" chapter to check interface requirements.

Online Documentation Installation Requirements

The following table details the disk space required for installation of Xilinx documentation and the online browser, DynaText, from the Documentation CD-ROM. Individual book descriptions are in the "Getting Started" chapter.

CD-ROM Component	Disk Space
Entire Documentation CD-ROM	~182 MB total
DynaText Browser	~15.6 MB
DynaText Tutorial Books	~6 MB
Entire Xilinx Online Documentation Collection	~165 MB total
Alliance Series Quick Start Guide	~2 MB
Development System User Guide	~2 MB
Hardware User Guide	~1 MB
Constraints Editor User Guide (Beta Version Document)	~5.5 MB
Cadence Interface/Tutorial Guide	~19 MB
Mentor Graphics Interface/Tutorial Guide	~49 MB
Viewlogic Interface/Tutorial Guide	~20 MB
Synopsys® (XSI™) Interface/Tutorial Guide	~6 MB
Development System Reference Guide	~2 MB
JTAG Programmer Guide	~3 MB
Design Manager/Flow Engine Reference/User Guide	~30 MB
EPIC Design Editor Reference/User Guide	~6 MB
LogiBLOX™ Reference/User Guide	~4 MB
Floorplanner Reference/User Guide	~5 MB
Hardware Debugger Reference/User Guide	~8 MB
Timing Analyzer Reference/User Guide	~9 MB
PROM File Formatter Reference/User Guide	~4 MB
CPLD Schematic Design Guide	~1 MB
CPLD Synthesis Design Guide	~2 MB
Libraries Guide	~9 MB

CORE Generator Installation Requirements

The following table gives the disk space needed to install components of the Xilinx CORE Generator CD-ROM. All disk space sizes are approximate. The CORE Generator is not supported for HP systems.

Component	Disk Space
Xilinx CORE Generator-WS	~32 MB
Xilinx CORE Generator-PC	~22 MB
Adobe Acrobat Reader	~7.4 MB

Note: The Acrobat Reader software is used to read the CORE Generator online documentation. The setup program will search for a version of Acrobat Reader on your system during install, and if none is present, Acrobat Reader will be installed automatically.

Chapter 4

Vendor Versions and Compatibility

The Alliance 1.5 software is compatible with various simulation interfaces from Xilinx CAE vendors. This chapter lists the current supported third-party vendor versions and platforms, as well as relevant software name changes.

The following sections are in this chapter.

- "Supported Vendor Versions"
- "Vendor Product Name Changes"
- "Vendor Software Not Supported for Alliance 1.5"
- "Platform Support for Vendor Software"

Note: Before you install this software, verify that you have the appropriate version of your CAE tool interface program.

Supported Vendor Versions

The following table shows tool software names with the supported vendor version numbers.

Vendor Name	Software	Version
Mentor Graphics	Mentor Graphics Software	C.1
Synopsys	Design Compiler VSS FPGA Compiler FPGA Express	1997.01 / 1998.01 1997.02 1997.08
Viewlogic	Workview Office (PC) Powerview (Workstation)	7.4 6.0
Cadence	Concept Verilog-XL	97A 97A

Vendor Name	Software	Version
Exemplar	Leonardo Leonardo Spectrum	4.22 5.0
Synplicity	Synplicity	3.x
MTI	ModelSim (Verilog/VHDL)	4.6H

Note: The Exemplar and Synplicity products are only for use with the Xilinx Virtex devices.

The previous table does not list all of the supported Xilinx third-party vendors and interface tools. For a complete, updated list, see the Xilinx web site at http://www.xilinx.com. For more information about the vendor libraries that are provided on your CAE Tools CD-ROM, refer to the "CAE Interface Installation Requirements" section of the "System Requirements" chapter.

Note: Xilinx software is compatible with the schematic and simulation interface within Viewlogic's Workview Office product, but the actual Viewlogic EDA/schematic tools are not provided with this software. The Viewlogic tools can be used for either CPLD or FPGA designs.

Vendor Product Name Changes

Several third-party vendors have changed the names of their software. Following is a list of the individual name and version changes for each affected product.

- Synopsys FPGA Express 1.2 to FPGA Express V2 1997.08
- Synopsys FPGA Compiler II to FPGA Compiler 1997.01
- Synopsys FPGA Compiler 3.4b to FPGA Compiler 1997.02
- Synopsys Design Compiler 3.4b to Design Compiler VSS 1998.01

Vendor Software Not Supported for Alliance 1.5

The following software is not supported for this release.

- Synopsys FPGA Compiler (I)
- Viewlogic Viewsynthesis
- X-ABEL

- OrCAD

Note: Exemplar has discontinued the Galileo software.

Platform Support for Vendor Software

The following table shows the supported vendor versions broken down by operating system platform.

In the following table, "Sol" stands for the Sun Solaris platform, "HP" stands for the Hewlett-Packard platform, "NT" stands for Windows NT, and "95" stands for Windows 95. An "x" indicates that the operating system is supported in the Alliance 1.5 release.

Vendor Software	Sol	HP	NT	95
Synopsys Design Compiler 1998.01	x	x		
Synopsys FPGA Compiler 1997.02	x	x		
Mentor Graphics Software Packages	x	x		
Cadence Concept 97A	x	x		
Viewlogic Powerview 6.0	x	x		
Synopsys FPGA Express 1997.08			x	x
Synopsys Workview Office 7.4			x	x
Synplicity 3.x				
MTI ModelSim 4.6H			x	x

For a complete list of supported vendor software, see the Xilinx web site at http://www.xilinx.com/programs/alliance and click on the link for EDA vendor support.

For users of Japanese, Chinese, or Korean Windows or the NEC operating system, contact your third-party vendor to verify which software versions are supported for Xilinx products.

Chapter 5

Device and Package Support

This chapter lists the Xilinx devices and packages that are supported for the Alliance 1.5 release.

For more information on architectural families and specific device parameters, see *The Programmable Logic Data Book.*

The following tables list the Xilinx devices, packages, and speed grades. The tables are broken down by Xilinx device family.

Table 5-1 XC3000 Family

Device	Packages	Speed Grades
XC3020A	PC68, PC84, PG84, CB100, PQ100	-6 -7
XC3030A	PC44, VQ64, PC68, PC84, PG84, PQ100, VQ100	-6 -7
XC3042A	PC84, PG84, PP132, PG132, CB100, PQ100, VQ100, TQ144	-6 -7
XC3064A	PC84, PP132, PG132, TQ144, PQ160	-6 -7
XC3090A	PC84, PQ160, TQ144, CB164, PP175, PG175, TQ176, PQ208	-6 -7
XC3120A	PC68, PC84, PG84, PQ100, CB100	-09 -1 -2 -3 -4 -5
XC3130A	PC44, PC68, PC84, PG84, PQ100, VQ100, VQ64	-09 -1 -2 -3 -4 -5
XC3142A	PC84, PG84, PP132, PG132, CB100, PQ100, VQ100, TQ144	-09 -1 -2 -3 -4 -5
XC3164A	PC84, PP132, PG132, PQ160, TQ144	-09 -1 -2 -3 -4 -5
XC3190A	PC84, PQ160, TQ144, CB164, PP175, PG175, TQ176, PQ208	-09 -1 -2 -3 -4 -5
XC3195A	PC84, PQ160, CB164, PP175, PG175, PQ208, PG223	-09 -1 -2 -3 -4 -5
XC3020L	PC84	-8

Table 5-1 XC3000 Family

Device	Packages	Speed Grades
XC3030L	VQ64, PC84, VQ100	-8
XC3042L	PC84, VQ100, TQ144	-8
XC3064L	PC84, TQ144	-8
XC3090L	PC84, TQ144, TQ176	-8
XC3142L	PC84, VQ100, TQ144	-2 -3
XC3190L	PC84, TQ144, TQ176	-2 -3

Table 5-2 XC4000 Family

Device	Packages	Speed Grades
XC4003E	PC84, PQ100, VQ100, PG120	-1* -2 -3 -4
XC4005E	PC84, PG156, PQ100, PQ160, PQ208, TQ144, CB164	-1* -2 -3 -4
XC4006E	PC84, TQ144, PG156, PQ160, PQ208	-1* -2 -3 -4
XC4008E	PC84, PQ160, PG191, PQ208	-1* -2 -3 -4
XC4010E	PC84, PQ160, PG191, PQ208, HQ208, BG225, CB196	-1* -2 -3 -4
XC4013E	PQ160, PQ208, HQ208, PG223, BG225, PQ240, HQ240, CB228	-1* -2 -3 -4
XC4020E	PG223, HQ208, HQ240	-1* -2 -3 -4
XC4025E	PG223, HQ240, PG299, HQ304, CB228	-2 -3 -4
XC4028EX	HQ208, HQ240, HQ304, PG299, BG352, CB228	-2 -3 -4*
XC4036EX	HQ304, BG432, PG411, BG352, HQ240	-2 -3 -4*
XC4005L	PC84, PQ100, PQ208	-5*
XC4010L	PC84, TQ176, PQ208	-5*
XC4013L	PQ208, BG225, PQ240	-5*
XC4002XL	PC84, PQ100, VQ100	-09* -1* -2* -3*
XC4005XL	PC84, PQ100, PQ160, PQ208, TQ144, VQ100	-09* -1 -2 -3
XC4010XL	BG256, PC84, PQ100, PQ160, PQ208, TQ144, TQ176	-09* -1 -2 -3
XC4013XL	BG256, HT144, HT176, PQ160, PQ208, PQ240	-08** -09* -1 -2 -3

Table 5-2 XC4000 Family

Device	Packages	Speed Grades
XC4020XL	BG256, HT144, HT176, PQ160, PQ208, PQ240	-09* -1 -2 -3
XC4028XL	BG256, BG352, HQ160, HQ208, HQ240, HQ304, PG299	-09* -1 -2 -3
XC4036XL	BG352, BG432, HQ160, HQ208, HQ240, HQ304, PG411, CB228	-08** -09* -1 -2 -3
XC4044XL	BG352, BG432, HQ160, HQ208, HQ240, HQ304, PG411	-09* -1 -2 -3
XC4052XL	BG560, BG432, HQ240, HQ304, PG411	-09* -1 -2 -3
XC4062XL	BG432, HQ240, HQ304, BG560, PG475, CB228	-08** -09* -1 -2 -3
XC4085XL	BG432, BG560, PG559	-09* -1 -2 -3
XC40110XV	HQ240, BG352, BG432, BG560	-09 -1 -2**
XC40150XV	HQ240, BG352, BG432, BG560, PG559	-09 -1 -2**
XC40200XV	BG432, BG560	-09 -1 -2**
XC40250XV	BG432, BG560, PG559	-09 -1 -2**
XC4013XLA	BG256, PQ160, PQ208, PQ240	-09 -1 -2**
XC4020XLA	BG256, PQ160, PQ208, PQ240	-09 -1 -2**
XC4028XLA	BG256, BG352, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XC4036XLA	BG352, BG432, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XC4044XLA	BG352, BG432, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XC4052XLA	BG352, BG432, BG560, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XC4062XLA	BG352, BG432, BG560, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XC4085XLA	BG352, BG432, BG560, HQ160, HQ208, HQ240, HQ304	-09 -1 -2**
XQ1701L	CC44B, CC44M, SO20N	-2
XQ4005E	CB146M, PG156M	-4
XQ4010E	CB196M, PG191M	-4
XQ4010E	HQ208N	-3
XQ4013E	CB228M, PG223M	-4

Table 5-2 XC4000 Family

Device	Packages	Speed Grades
XQ4013E	HQ240N	-3
XQ4025E	CB228M, PG299M	-4
XQ4028EX	CB228M, CB228B, PG299M, PG299B, HQ240N, BG352N	-4
XQ4013XL	CB228M, CB228B, PG223M, PG223B, PQ240N, BG256N	-3
XQ4036XL	CB228M, CB228B, PG411M, PG411B, HQ240N, BG352N	-3
XQ4062XL	CB228M, CB228B, PG475M, PG475B, HQ240N, BG432N	-3

* preliminary

** advanced

Table 5-3 Virtex Family

Device	Packages	Speed Grades[1]
XCV50	PQ240, BG256	-4 -5**
XCV100	PQ240, BG256	-4 -5**
XCV150	PQ240, BG352	-4 -5**
XCV200	PQ240, BG352	-4 -5**
XCV300	PQ240, BG352, BG432	-4 -5**
XCV400	HQ240, BG432, BG560	-4 -5**
XCV600	HQ240, BG432, BG560	-4 -5**
XCV800	HQ240, BG432, BG560	-4 -5**
XCV1000	BG560	-4 -5**

** advanced

[1]Virtex speeds for the 1.5 release are from simulated, not measured, data.

Table 5-4 Spartan Family

Device	Packages	Speed Grades
XCS05	PC84, VQ100	-3 -4*
XCS10	PC84, VQ100, TQ144	-3 -4*
XCS20	PQ208, VQ100, TQ144	-3 -4*
XCS30	PQ208, PQ240, VQ100, TQ144, BG256	-3 -4*
XCS40	PQ208, PQ240, BG256	-3 -4*
XCS05XL	PC84, VQ100	-3 -4**
XCS10XL	PC84, VQ100, TQ144	-3 -4**
XCS20XL	PQ208, VQ100, TQ144	-3 -4**
XCS30XL	PQ208, PQ240, VQ100, TQ144, BG256	-3 -4**
XCS40XL	PQ208, PQ240, BG256	-3 -4**

* preliminary

** advanced

Table 5-5 XC5200 Family

Device	Packages	Speed Grades
XC5202	VQ64, PC84, PG156, PQ100, TQ144, VQ100	-3 -4 -5 -6
XC5204	PC84, PG156, PQ100, PQ160, TQ144, VQ100	-3 -4 -5 -6
XC5206	PC84, PG191, PQ100, PQ160, PQ208, TQ144, VQ100, TQ176	-3 -4 -5 -6
XC5210	PC84, PG223, BG225, PQ160, PQ208, PQ240, TQ144, TQ176	-3 -4 -5 -6
XC5215	HQ304, PG299, HQ208, HQ240, BG352, BG225, PQ160	-3 -4 -5 -6

Table 5-6 XC9500 Family

Device	Packages	Speed Grades
XC9536	PC44, VQ44, CS48	-5 -6 -7 -10 -15
XC9572	PC44, PC84, PQ100, TQ100	-7 -10 -15
XC95108	PC84, PQ100, TQ100, PQ160	-7 -10 -15 -20
XC95144	PQ100, PQ160, TQ100	-7 -10 -15
XC95216	HQ208, PQ160, BG352	-10 -15 -20
XC95288	HQ208, BG352	-15 -20
XC9536XL[1]	PC44, VQ64, CS48	-5 -7 -10
XC9572XL[1]	PC44, VQ64, TQ100	-7 -10
XC95144XL[1]	TQ100, TQ144	-7 -10
XC95288XL[1]	TQ208	-10

[1]Not yet supported for JEDEC map creation.

Table 5-7 SPROMs

Device	Packages	Volts
XC17S05	PD8C, VO8C	5V
XC17S10	PD8C, VO8C	5V
XC17S20	PD8C, VO8C	5V
XC17S30	PD8C, VO8C	5V
XC17S40	PD8C, SO20C	5V
XC1718D	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5V
XC1736D	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5V
XC1765D	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5V
XC17128D	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	5V
XC17256D	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	5V
XC17128E	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	5V
XC17256E	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	5V
XC1701	PD8C, PD8I, SO20C, SO20I, PC20C, PC20I	5V

Table 5-7 SPROMs

Device	Packages	Volts
XC1718L	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC1765L	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC17128L	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC17256L	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC17128E	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC17256E	PD8C, PD8I, VO8C, VO8I, PC20C, PC20I	3.3V
XC1701L	PD8C, PD8I, SO20C, SO20I, PC20C, PC20I	3.3V
XC17512L	PD8C, SO20C, PC20C	3.3V
XC17S05XL	PD8C, VO8C	3.3V
XC17S10XL	PD8C, VO8C	3.3V
XC17S20XL	PD8C, VO8C	3.3V
XC17S30XL	PD8C, VO8C	3.3V
XC17S40XL	PD8C, SO20C	3.3V
XC1736E	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5.5V
XC1765E	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5.5V
XC1765EL	PD8C, PD8I, SO8C, SO8I, VO8C, VO8I, PC20C, PC20I	5.5V
XC1702LV	Q44C, Q44I	3.3V
XC1704LV	Q44C, Q44I	3.3V

Chapter 6

Installing Alliance on Workstations

This chapter describes how to install the Alliance software on workstations. The Alliance software can be used on a single standalone system or on a number of systems sharing a network.

This chapter is comprised of the following main sections.

- "Installation Overview for this Release"
- "Installing Alliance Series 1.5 Software"
- "Installing CAE Interface Libraries (Standalone)"
- "Installing Online Documentation (Standalone)"
- "Installing the Xilinx CORE Generator"
- "Setting Up Xilinx Environment Variables"
- "Setting Up CAE Interface Environment Variables"
- "Setting Up DynaText Variables and Preferences"

Installation Overview for this Release

Xilinx has implemented several changes into the installation program in order to make the process easier for users. The following list details the main changes to the installation process.

- FLEX_LM security has been eliminated for Alliance 1.5. You no longer need to set up LM_LICENSE_FILE variables.
- The Alliance 1.5 Software has been compressed onto the CD-ROM for easier installation. You do not need to have a separate file unzipping application on your system for installation.

Warning: The Alliance 1.5 default directory name is the same as Alliance 1.4. If you install to this directory, your 1.4 software will be over-

written. However, if you are also deleting or overwriting installations previous to Alliance 1.4, you may need to remove some files and icons manually.

- You cannot run uninstall from a system that you did a network install on. If you run uninstall from the system you have set up to point to an existing environment, uninstall will delete that existing environment. Make sure that you clean up your environment paths which point to network sources.

Upgrading From Earlier Xilinx Software

You cannot upgrade the new release, Alliance Series 1.5, from an earlier release of Xilinx software. You must fully install the new software; however, you can migrate existing design files for use with the Alliance software.

Reference the *Xilinx Software Conversion Guide* for converting XACT 5.x.x designs to Xilinx Alliance Series 1.5 designs is provided in the userware directory, which is installed along with the Alliance 1.5 software tools.

Note: Xilinx strongly recommends that you install this release of the software in a completely separate directory from any earlier Xilinx releases if you wish to use some of your previous versions of design tools.

Installing Alliance Series 1.5 Software

This section describes how to install the Xilinx Design Implementation Tools software on a workstation. M

Installation Procedures

This section details the installation procedures that you should follow, depending on the type of installation that you wish to perform.

Before installing any software components, check that your system meets the appropriate requirements as described in the "System Requirements" chapter.

If you plan to install the Alliance 1.5 software, the CAE interface libraries, and the Xilinx online documentation on your system, refer to the following sections.

1. Mounting And Unmounting CD-ROMS
2. Initial Installation Steps
3. Installing CAE Interface Libraries
4. Installing Online Documentation

If you are only going to perform a partial install of software tools, use the procedures in the following sections. Xilinx recommends that you install the Alliance 1.5 software before installing any other tools.

1. Mounting And Unmounting CD-ROMS
2. Installing CAE Interface Libraries (Standalone)
3. Installing Online Documentation (Standalone)

You should install the CORE Generator after installing your other Design Implementation Tools. Installation instructions for the Xilinx CORE Generator are on the CD-ROM cover and in the "Installing the Xilinx CORE Generator" section. Instructions for the ModelSim CD-ROM are on the cover of the CD-ROM.

Mounting And Unmounting CD-ROMS

The following section gives instructions for mounting and unmounting CD-ROMs to the appropriate drive on your system. You will need to perform these steps each time you install software tools from a different CD-ROM.

Mounting and Verifying a CD-ROM

1. Log in as root on the workstation connected to the CD-ROM drive.

   If you are performing the installation from a different workstation, use the **`rlogin`** command to log in to the workstation connected to the CD-ROM drive.

2. Place the appropriate CD-ROM in a caddy and insert into the drive.
3. If necessary, create a mount point for the CD-ROM drive by entering this command:

```
mkdir/cdrom
```

4. Mount the CD-ROM.

   Solaris systems with the Volume Manager automatically mount the CD-ROM. If you have the Volume Manager, proceed to Step 5. HP/UX system users should perform the following steps.

   a) Find out which platform you are mounted on with the following command.

   ```
   uname -a
   ```

   b) Mount the CD-ROM drive.

pfs_mount -t rrip -x unix /dev/dsk/*device_name* **/cdrom**

   where *device_name* indicates the name of the CD-ROM device. Ask your System Administrator for the *device_name*.

   To use pfs_mount, you must be running the PFS daemons. See the "HP Platform Setup" appendix for details.

5. Verify that the CD-ROM drive is mounted.

   ```
   ls /cdrom
   ```

   The installation screens are designed to fit into an 80 column width window. Use an xterm or command window that is 80 characters wide for optimal displays.

Warning: Do *not* change to the CD-ROM directory. If you do, you will not be able to unmount.

6. If you are installing software tools, you can insert the appropriate CD-ROM into your caddy after you have verified that the drive is mounted. Proceed to the appropriate section for the software that you wish to install.

Unmounting a CD-ROM

1. Open another command shell and unmount the current CD using the umount command. Solaris users do not need to use an unmount command. Following are three examples if you are mounted to /cdrom:

   ```
   pfs_unmount/cdrom
   ```

   ```
   /etc/umount/cdrom
   ```

`/etc/umount/dev/dsk/`*device_name* `/cdrom`

where *device_name* indicates the name of the CD-ROM device.

2. Eject the CD using the eject command.

   `eject`

3. Remove the current CD from the CD-ROM drive.

Initial Installation Steps

The following steps should be performed by all users who wish to begin installing the Alliance software tools.

1. Insert and mount the Alliance Series 1.5 Design Implementation Tools CD-ROM (HP or SOL).

   See the "Mounting And Unmounting CD-ROMS" section for details.

2. Run the installation program. At the UNIX prompt, type the following commands.

   Solaris users: `/cdrom/cdrom0/install`

   HP users: `/cdrom/install`

3. The "Xilinx Alliance Installation Program" screen displays. This screen gives directions about how to navigate through the installation process.

   Pressing **B** will take you to the previous screen, pressing **N** will take you to the next screen, and pressing **C** will cancel the installation. Pressing **M** will allow you to modify a typed entry. Brackets around a letter " [N] " indicate the currently selected or default option. Press **Enter** to continue.

4. The "Software License Agreement" screen displays.

   The three options are [1] Accept, [2] Decline, and [3] Review.

   - If you are familiar with the licensing agreement and you decide to accept the terms of the Agreement and install the software, press **Enter** for the Accept option and proceed to Step 9.
   - If you do not accept the terms of the agreement and do not wish to install the software, enter the Decline menu option (2) and press **Enter**. Press **Enter** again to confirm your choice and move to the next screen.

- If you are not familiar with the licensing agreement, review the Agreement before deciding to accept or decline by entering the Review menu option **(3)** and pressing **Enter**. Press **Enter** again to review the agreement. When you have finished reading the licensing agreement, press **Enter** to display the Accept, Decline, and Review options again.

5. The "Enter Alliance Source Directory" screen appears.

   Enter the source directory from which you will be copying the files or the CD or network from which you will be running. Press **Enter** to install from the default source directory, the CD-ROM directory.

6. The "Enter Alliance Destination Directory" screen displays.

   Enter a destination directory in which to install the Alliance Series 1.5 Software. The destination directory displays. Press **Enter** to continue.

Note: If the destination directory that you entered does not exist on your system, a prompt displays asking if you want to create the new directory. Press **Y** and then press **Enter** if you want to create a new directory for the Xilinx software. If you entered the incorrect directory, enter **M** and then reenter the correct name. (Xilinx recommends that you install the software in the /xilinx directory.) You can use the tilde (~) to represent your home directory. That is, ~ represents **/home/*user-name*.**

7. The "Select Platform" screen appears.

   If your platform type is already selected, press **Enter**. Otherwise, enter the menu number option for the platform you want to install at the colon (:) prompt. The screen reappears with your selection. Press **Enter**.

8. The "Select Type of Installation" menu displays.

   You can choose one of the two following installation types.

   - Typical Installation

     This type of installation is for users who wish to install Xilinx software tools and online documentation directly onto their workstation.

   - Network Installation

Select this option if you plan to install the Alliance software on your network. Install will copy the install files to the network location that you specify. Other users can then run the installation program directly from their networked workstation.

After installation, set up the Xilinx variables as indicated in this chapter. Use the setup file to set up environment variables and paths. Network installation is then complete.

Make your selection and press **Enter** to continue. Follow the instructions for your selection.

"Typical Installation" users will be prompted to enter a CD key, which is a number located on a sticker on your CD-ROM case. A list of devices available to you displays. After you have finished choosing the devices and sub-components that you wish to install, make sure that you check all of the components and files so that you do not install unwanted devices.

9. When all of the design implementation files are installed, the Run CAE Installation screen displays. Read the following options to determine your next step.

   - To install the CAE interface libraries, press **Enter** and then proceed to the"Installing CAE Interface Libraries" section.
   - To install online documentation without installing the CAE interface libraries, enter number **2** at the prompt and then press **Enter**. A screen displays prompting you to install online documentation. Proceed to the "Installing Online Documentation" section.

     If you are not installing online documentation or CAE interface libraries, enter number **2** at the prompt and then press **Enter**. When the screen display appears asking if you want to install online documentation, enter 2 at the colon prompt and press **Enter** to complete your installation. Messages display indicating environment variables and paths that have been set up in a file named setup.

     Use this file to set up your environment variables. Environment variables are described in the "Setting Up Xilinx Environment Variables" section.

Installing CAE Interface Libraries

This section explains how to install the CAE interface libraries onto your system. The section also describes how to install these libraries onto your network. This section assumes that you have already installed the Alliance 1.5 software and online documentation.

Note: If you installed the Xilinx design implementation tools at some earlier time and did not install the CAE libraries, see the "Installing Online Documentation" section for instructions.

This section assumes that you have already installed the Alliance 1.5 Software as described in the "Installing Alliance Series 1.5 Software" section and have chosen to install the CAE interface libraries.

1. Unmount the current CD-ROM and eject it from the caddy, as described in the "Mounting And Unmounting CD-ROMS" section.
2. Insert the Alliance Series 1.5 CAE Interfaces CD into the caddy and mount the CD-ROM drive onto the same directory that you used for the Alliance 1.5 Software installation. See the "Mounting And Unmounting CD-ROMS" section for details.
3. Run the installation program by typing the following commands at a UNIX prompt.

   HP users: **`/cdrom/install`**.

   Solaris users: **`/cdrom/cdrom0/install`**
4. The Welcome screen displays.

   Read the directions and press **`Enter`**. You will go through several installation screens which prompt you to determine your source and destination directories and select your platform.

   When list of CAE interface libraries displays, follow the instructions to deselect or select libraries from the list. After you have finished, type **`N`** and press **`Enter`** to continue.

   For a complete list of CAE libraries and device families available to you, see the "CAE Interface Installation Requirements" section of the "System Requirements" chapter.
5. You are prompted to select device families for installation.

Follow the instructions to deselect or select each device family or component. When you have finished, type **N** and press **Enter**.

6. The next screen summarizes the choices that you have made.

   Review your installation choices; if you are satisfied, press **Enter** to begin installing the libraries and families. If you need to make changes, type **B** to go back through previous screens.

   When you have confirmed your choices, press **Enter** to continue. A message displays indicating that the libraries are installed. Press **Enter** to continue.

7. The "Run Documentation Installation" screen displays.

   - If you would like to install online documentation, press **Enter** and proceed to the "Installing Online Documentation" section.
   - If you do not want to install online documentation, enter the number **2** at the colon and press **Enter**. A screen displays indicating that documentation install is complete. Press **Enter**. You are prompted to examine the README file. Xilinx recommends that you read this file. Press **Enter** again.
     After you look at the README file, press **Enter**. Set up your Xilinx environment variables and paths as indicated in the "Setting Up Xilinx Environment Variables" section and the "Setting Up CAE Interface Environment Variables" section.

Installing Online Documentation

This section explains how to install the online documentation onto your system.

Note: If you installed the Xilinx design implementation tools at some earlier time and did not install the online documentation, see the "Standalone Network Installation (CAE Libraries)" section for installation instructions.

This section assumes that you have already installed the Alliance 1.5 software tools and (optional) chosen CAE libraries. Your screen display should be prompting you telling you to remove the previous CD-ROM from your caddy.

1. Insert the online documentation CD into the caddy and mount the CD-ROM drive onto the same path that you used for the Alliance 1.5 Software. See the "Mounting And Unmounting CD-ROMS" section for details.

   Press **Enter** to continue. Follow the instructions on the subsequent screens, which prompt you to enter your source and destination directories and operating platform.

2. When the list of Xilinx online books displays, follow the instructions to deselect or select books from the list. Note that *Alliance Answers Book* can only be installed from your Implementation Tools CD-ROM.

Note: When you install the design implementation tools, you have the option of installing the DynaText browser. You can also choose to view online documents from the CD instead of installing them on your hard drive.

   When you have finished selecting books, type **N** and press **Enter**.

3. A screen which summarizes your choices appears.

   If you want to review or change any settings, press **B** to go back through the installation screens. If you are satisfied with the settings, type **N**.

   Confirm your book choices and press **Enter** to begin installing the online documentation.

4. After installation is complete, press **Enter** to continue. The next display screen lists the Xilinx environment variables that you need to set before starting the Alliance software.

   Turn to the "Setting Up Xilinx Environment Variables" section and the "Setting Up DynaText Variables and Preferences" section for details. If you installed any CAE libraries, make sure to refer to the "Setting Up CAE Interface Environment Variables" section.

5. After the installation is complete for this CD-ROM, remove it from the caddy.

Installing CAE Interface Libraries (Standalone)

This section explains how to install the CAE interface libraries if you have installed the Xilinx Design Implementation Tools software but

did not install the libraries at that time. You can also use the following procedure to add libraries that you did not install previously.

1. Place the Alliance Series 1.5 CAE Interfaces CD-ROM in a caddy and insert the caddy into the drive.
2. Mount the drive as described in the "Mounting And Unmounting CD-ROMS" section.
3. At the UNIX prompt, run the installation program by entering the appropriate command, as follows.

HP users: **`/cdrom/install`**.

Solaris users: **`/cdrom/cdrom0/install`**

4. The Welcome screen displays.

   Press **`Enter`** to continue the installation. A screen displays prompting you choose a Typical Installation or Network Installation.

   - If you want to perform a typical installation, press **`Enter`** and proceed to the "Standalone Typical Installation (CAE Libraries)" section. This installation choice installs the Xilinx CAE interface libraries from your local CD-ROM drive onto your system.
   - If want to install the CAE interface libraries to your network, proceed to the "Standalone Network Installation (CAE Libraries)" section.

Standalone Typical Installation (CAE Libraries)

After you select Typical Installation, a screen displays indicating the source directory from which directory the CAE interface libraries will be installed.

1. Press **`Enter`** to install from the default source directory, your CD-ROM directory.
2. The next screen prompts you to enter a destination directory in which to install the CAE interface libraries. This directory must be the same directory in which you installed the Alliance 1.5 software.

Note: If you enter the incorrect directory, select **M** and then enter the correct one. You can use the tilde (~) to represent your home directory. That is, ~ represents /home/*username.*

3. The next screen asks you to enter your platform type. The default option should display your platform. If not, type the correct number and press **Enter**. Press **Enter** a second time to continue.
4. The CAE interface libraries display.

   follow the instructions to deselect or select libraries from the list. When you have finished selecting libraries to install, type **N** and press **Enter** to continue.
5. You are prompted to select device families for installation.

   Follow the instructions to deselect or select device families. When you have finished, type **N** and press **Enter** to continue.
6. A screen appears, summarizing the choices that you have made.

   Verify your installation choices. If you want to review or change any settings, enter **B** to go back through the installation screens. If you are satisfied with the settings, enter **N** to begin copying files.

   Press **Enter** to begin installing the libraries and families. Messages display indicating that the libraries are being installed.
7. Press **Enter**. A screen displays prompting you to read the README file. Xilinx recommends that you look at this file before continuing. Press **Enter** and read the file.
8. When you have finished reading the file, press **Enter**. Messages display indicating that you need to set up environment variables and set your path. Environment variables are described in the "Setting Up CAE Interface Environment Variables" section.

Standalone Network Installation (CAE Libraries)

This subsection assumes that you have completed Steps 1 through 4 in the "Installing Online Documentation" section.

1. You are prompted to enter your installation type. Type the number **2** at the prompt and press **Enter**. Press **Enter** again to confirm your selection.
2. A screen displays indicating from which source directory the CAE interface libraries will be accessed for installation.

Press **Enter** to run from the default source directory, the CD-ROM directory. This directory should be the location of the CD-ROM or a network. To run from a different CD-ROM drive or a network, select **M** and press **Enter**.

3. The next screen prompts you to enter a destination directory. The installation log and setup file will be written to the directory that you specify. Press **Enter** when you are ready to continue.

Note: If the destination directory does not exist, a prompt displays asking if you want to create the new directory. Also if you entered the incorrect directory, enter M and then reenter the correct name.
You can use the tilde (~) to represent your home directory. That is, ~ represents /home/*username*.

4. You are prompted to enter your platform type.

   If your platform is already selected, press **Enter**. Otherwise, enter the menu number option for your platform at the colon (:) prompt. The screen reappears with your selection. Press **Enter**.

5. The next screen summarizes the choices that you have made.

   If you want to review or change any settings, enter **B**. If you are satisfied with the settings, press **Enter** or **N** to begin copying files.

6. When the installation is complete, set up the appropriate variables as indicated in the "Setting Up CAE Interface Environment Variables" section. Use the setup file to set up environment variables and paths.

Installing Online Documentation (Standalone)

This section explains how to install the Xilinx online documentation and core online book files. The section also describes how to access the online documentation from a CD-ROM or network.

1. Place the Alliance Series Documentation CD-ROM in a caddy and insert the caddy into the drive.
2. If necessary, create a mount point for the CD-ROM drive and mount the drive as described in the "Mounting And Unmounting CD-ROMS" section.
3. At the UNIX prompt, enter **/cdrom/install**. The Welcome screen displays.

   For the Solaris platform, enter **/cdrom/cdrom0/install**.

4. Press **Enter** to continue the installation. A screen displays prompting you to select a Typical Installation or Network Installation.

   - If you want to perform a typical installation, press Enter and proceed to the "Standalone Typical Installation (Online Documentation)" section. This installation choice installs the Xilinx online documentation from your local CD-ROM drive onto your system.
   - If want to install the online documentation to your network, proceed to the "Standalone Network Installation (Online Documentation)" section.

Standalone Typical Installation (Online Documentation)

1. After you select Typical Installation, a screen displays indicating from which directory the online documentation will be installed. Press **Enter** to install from the default source directory, the CD-ROM directory.
2. Enter a destination directory in which to install the online documentation. This directory must be the same directory in which you installed the Alliance 1.5 software.

Note: If the destination directory does not exist, a prompt displays asking if you want to create the new directory. If you enter the incorrect directory, select M and then enter the correct one. You can use the tilde (~) to represent your home directory. That is, ~ represents /home/*username*.

3. A prompt displays asking you to enter your platform type. The default should display your platform. If your platform is already selected, press **Enter**. Otherwise, enter the menu number option for your platform at the colon (:) prompt. The screen reappears with your selection. Press **Enter**.
4. The list of online books displays.

   Follow the instructions to deselect or select books from the list. A list of all of the books is in the "Xilinx Documentation Overview" section of the "Getting Started" chapter.

Note: Even if you have installed the DynaText browser from a previous software release, you must install DynaText version3.1.

Otherwise, you will not be able to read the latest versions of the Xilinx online documents.

After you have finished selecting books, type **N** and press **Enter**.

5. A screen appears that summarizes the choices that you have made. If you want to review or change any settings, enter **B**. Type **N** to continue.
6. Press **Enter** to begin installing the Xilinx online documentation. The install procedure tells you when each document you selected is installed.When the installation is complete, press **Enter** again.
7. Messages display instructing you to set up Xilinx environment variables and paths. See the "Setting Up DynaText Variables and Preferences" section for instructions.

Standalone Network Installation (Online Documentation)

This subsection assumes that you have completed Steps 1 through 4 in the "Installing Online Documentation (Standalone)" section.

1. After you select Network Installation, a screen displays indicating from which directory the online documentation is accessed for installation.

   Press **Enter** to run from the default source directory, which is the CD-ROM directory. To run from a different directory, select **M** to modify your selection. Press **Enter** when you are ready to continue.

2. You are prompted to enter a destination directory in which to install the Xilinx documentation. Press **Enter** when you have entered your chosen destination directory. Xilinx recommends that you install the online documentation in the same directory as the Alliance software tools.

Note: If the destination directory does not exist, a prompt displays asking if you want to create the new directory. Also if you entered the incorrect directory, enter **M** and then reenter the correct name. You can use the tilde (~) to represent your home directory. That is, ~ represents /home/*username*.

3. A prompt displays asking you to enter your platform type.

If your platform is already selected, press **Enter**. Otherwise, enter the menu number option for your platform at the colon (:) prompt. The screen reappears with your selection. Press **Enter**.

4. A screen appears which summarizes the choices that you have made.

   Press **Enter** if you are satisfied with your settings and wish to begin the installation.

5. When the installation is complete, set up the Xilinx variables as indicated in the "Setting Up DynaText Variables and Preferences" section. You can also access the online documentation by sourcing the setup file and then entering the **dtext** command.

Installing the Xilinx CORE Generator

This section describes how to install the Xilinx CORE Generator. This installation is optional. This section assumes that you have already installed the Alliance 1.5 software tools.

The CORE Generator is supported for Solaris 2.5 and 2.6 platform, as well as on HP-UX 10.2 systems. For a description of the CORE Generator, refer to the "Xilinx CORE Generator" section of the "Features in This Release" chapter.

Use the following procedure to install the CORE Generator. For more information, refer to the install.txt file, located on the root directory of the CD-ROM.

1. Insert the CD-ROM labeled "CORE Generator" into your CD-ROM caddy. Mount the CD-ROM. Solaris systems with the Volume manager will automatically mount CD-ROMs.HP users should use the following command.

   ```
   pfs_mount -t rrip -x unix/dev/dsk/
   cdrom_device_name /cdrom
   ```

   For more details, refer to the "Mounting And Unmounting CD-ROMS" section, or Xilinx Answer #3905.

2. At the UNIX prompt, run the installation program by entering the following command.

```
/cdrom/cdrom0/install
```

3. The "Welcome" screen appears. Press **Enter.**

4. The "Software License Agreement" screen appears. Read the agreement. If you choose to accept the agreement and continue with the installation, press **Enter**.
5. The "LogiCORE License Agreement" screen appears. Read the agreement and press **Enter** when you are ready to continue.
6. The "Select CORE Generator Destination Directory" screen appears. When you have selected your destination directory, press **Enter**.
7. The "Start Copying Files" window appears. Verify your installation choices. If you need to change any of your options, click **B** until you have reached the appropriate screen. When you are ready to begin installation, press **Enter**.

Note: The CORE Generator documentation is implemented in .pdf file format, and is read using the Adobe Acrobat Reader program. If Acrobat Reader is not already installed on your system, it will be installed automatically. Acrobat Reader is approximately 7.4 MB.

8. File installation begins. A status bar appears during installation.
9. The "CORE Generator Setup Complete" screen appears when your installation is complete. You are prompted to read the README file. Press **Enter**.
10. The README file appears. Press **Enter** when you have finished reading the file.
11. When you have finished installing the CORE Generator, unmount the CD-ROM and remove the CD-ROM from the caddy.

Turn to the "Starting and Using the Xilinx CORE Generator" section of the "Getting Started" chapter for information about using the CORE Generator software.

You can also download new cores from the Xilinx web site. The Xilinx CORE Generator download page is at http://www.xilinx.com/products/logicore/coregen.

Setting Up Xilinx Environment Variables

This section details the environment variables that need to be created or updated before you can successfully run the Alliance 1.5 software. The following section details the messages that are displayed on your screen after you install the Alliance software.

General Variable Setup

Set up the appropriate Xilinx variables, as follows.

1. XILINX

   Define the XILINX environment variable and set it to the name of the directory into which you installed the software. For example, if you installed the software in /xilinx, you would enter:

   setenv XILINX /xilinx

2. Path

   Add the $XILINX/bin/*platform* directory to your path.

   The *platform* is **sol** for Solaris systems and **hp** for HP.

   To set your path for Solaris, use the following command.

   set path = ($XILINX/bin/*platform* $path)

3. If you want to access software from the CD-ROM, set up the your system as follows:

   setenv XILINX_CD *Path_to_CDROM*

set path = ($XILINX/bin/*platform* **$XILINX_CD/bin/***platform* **$path**

4. If you are using the Motif version of DynaText or the EPIC editor, you must set an environment variable to access the set of Key bindings used by a Motif application.
   You will find a XKeysymDB file has been installed into your $XILINX/bin/*platform* directory by the Xilinx install. You must do the following to access this file:

   For csh:

   setenv XKEYSYMDB $XILINX/bin/*platform*/XKeysymDB

   For sh:

   set XKEYSYMDB=$XILINX/bin/*platform*/XKeysymDB

   Failure to set up this environment variable will result in the following types of messages being displayed when you attempt to start up the DynaText viewer. The listed keys are not usable:

   ```
   Warning: translation table syntax error: Unknown
   keysym name: osfActivate
   ```

```
Warning: ... found while parsing ':
<Key>osfActivate:ManagerParentActivate()fDown
```

5. To use the Design Manager and Design Editor, 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
```

6. If you are logged onto a remote machine, use this DISPLAY setting:

   setenv DISPLAY *mynode*:**0.0**

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

   You will also need to execute the following command to allow a 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
   ```

7. Proceed as follows:

   - If you are running Solaris, then you need to set up the LD_LIBRARY_PATH variable. Proceed to Step 8.
   - If you are running software on an HP workstation, then you need to set up the SHLIB_PATH variable. Proceed to Step 9.

8. Set the LD_LIBRARY_PATH for Solaris.

- If LD_LIBRARY _PATH has already been set, enter the following command.

```
setenv LD_LIBRARY_PATH ${XILINX}/bin/platform:${LD_LIBRARY_PATH}
```

- If LD_LIBRARY _PATH has not been previously set, enter the following command.

```
setenv LD_LIBRARY_PATH ${XILINX}/bin/platform
```

9. Proceed as follows to set up the SHLIB_PATH variable.

   Set the SHLIB_PATH variable for HP workstations.

```
setenv SHLIB_PATH ${XILINX}/bin/hp:lib:/usr/lib
```

Variable Setup for Perl Users

The Xilinx installation program places a copy of Perl 5™ at the top of your directory path. If you already have a version of Perl on your system, you can change the PATH variable by running the following script from a UNIX C shell.

```
setenv PATH <your_path_to_perl>:$PATH
```

You can also remove the extra copy of Perl 5, as follows.

```
rm $XILINX/bin/your_platform/perl
```

If you choose not to delete Perl 5 and still wish to use your own version of Perl, ensure that the path to your Perl directory precedes the path to the Xilinx directory tree.

Setting Up LogiBLOX

For directions on setting Up LogiBLOX for Workstations, refer to the "Using LogiBLOX with CAE Interfaces" appendix of the Alliance 1.5 Quick Start Guide. You can install this manual from the online documentation CD-ROM, or read the printed copy provided inside your software package.

Setting Up CAE Interface Environment Variables

This section details how to set up the environment variables for various CAE interface components and libraries. This section assumes that you have already installed the CAE Libraries from the appropriate CD-ROM.

ModelSim Technology Interface

In order to be able to invoke ModelSim simulator software from within pld_dmgr, you must set the MODEL_TECH variable to point to the location of the Model Tech software in your system or network.

Following is an example of a variable setting.

```
setenv MODEL_TECH /products/modeltech.ver5_1b
```

Exemplar Interface

In order to be able to invoke Exemplar synthesis tools from within pld_dmgr you must set the EXEMPLAR variable to point to the location of the Exemplar software on your system or network.

Following is an example of a variable setting.

```
setenv EXEMPLAR /products/leonardo.ver4_2_2
```

Viewlogic Interface

Update your .cshrc or .login file by modifying the WDIR environment variable. You should already have a WDIR environment variable defined for the Powerview software; you only need to add a path to that variable.

1. Ensure you have set up your XILINX environment variable and path according to Steps and as described previously at the beginning of the "Setting Up Xilinx Environment Variables" section.

2. To integrate LogiBLOX with Powerview, a directory must be added to your existing WDIR environment variable, as follows:

```
setenv WDIR $XILINX/viewlog/data/logiblox/standard:usual_WDIR_paths
```

where *usual_WDIR_paths* are the paths you have already set up for Viewlogic.

The Xilinx directory $XILINX/viewlog/data/logiblox/standard is added to the WDIR variable so Viewdraw can locate the Viewscript customizations for LogiBLOX.

This directory can be anywhere in the WDIR search path, provided that the Xilinx directory is the first (or only) one that contains the file "vdrawus.vs".

The vdrawus.vs file contains user customizations to Viewdraw.

If you have other customizations in a vdrawus.vs file elsewhere in your WDIR search path, you can merge the Xilinx customizations into your existing vdrawus.vs file. Simply add the following line to the end of that file:

```
load( "logiblox.vs" );
```

3. To find out how to set up your project libraries, refer to the "Powerview" section of the "Getting Started" chapter in the *Viewlogic Interface/Tutorial Guide.*

Mentor Graphics Interface

Configure your .cshrc or .login file by updating them with the XILINX, LCA, and other environment variables specific to Mentor Graphics.

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

   ```
   setenv LCA $XILINX/mentor/data
   ```

   where $XILINX points to xilinx_dir_path.

2. Set up the SIMPRIMS variable as follows:

   ```
   setenv SIMPRIMS $LCA/simprims
   ```

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. Ensure that your Mentor Graphics variables are set up.
   - The optional MGC_GENLIB variable that points to the Mentor generic library.
   - The MGC_HOME environment variable that points to where you installed the Mentor Graphics software.
   - The MGC_LOCATION_MAP environment variable that points to the location of your mgc_location_map file.

Note: The MGC_WD environment variables are ignored. Reset this variable every time you change design directories

5. Add the Mentor libraries to the LD_LIBRARY_PATH as follows:

setenv LD_LIBRARY_PATH *mentor_path*/**lib:***mentor_path*/**shared/lib:***openwin_path*/ \
lib:${LD_LIBRARY_PATH}

Note: The previous two lines are actually a single command. The backslash (\) at the end of the first line is a continuation character indicating that the command wraps to a second line.

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

6. Add $XILINX/mentor/bin/*platform* to your path definition.

```
set path = ($XILINX/bin/platform $XILINX/mentor/bin/platform $path)
```

The following example illustrates how to configure your .login or .cshrc file for use with the Mentor Graphics interface. This example assumes you installed the design implementation tools software in /xilinx and the Mentor Graphics interface software under $XILINX/mentor/data and $XILINX/mentor/bin/sol.

```
setenv XILINX /xilinx
setenv LCA $XILINX/mentor/data
setenv SIMPRIMS $LCA/simprims
setenv MGC_GENLIB mentor_path/gen_lib
setenv MGC_HOME /tools/mentor/idea8.4
setenv LD_LIBRARY_PATH ${MGC_HOME}/lib:${MGC_HOME}/shared/lib: \
openwin_path lib:$XILINX/bin/sol:${LD_LIBRARY_PATH}
setenv MGLS_LICENSE_FILE mentor_license_path/mentor_license_file
setenv MGC_LOCATION_MAP /xilinx/project/mgc_location_map
set path = ($XILINX/mentor/bin/cpu_type ${MGC_HOME}/bin/xilinx/bin \
/sol $path)
```

Compiling Verilog/VHDL Libraries for Mentor QuickHDL

Refer to the README file located on the Alliance CAE tools CD-ROM for instructions on compiling VHDL libraries for Mentor's Modelsim and Quickhdl simulators. The README file also includes instructions on configuring environment variables for use with these products.

A System Administrator should perform this procedure when 1) a new release of Xilinx software is installed for Mentor Graphics users,

or 2) Mentor software requires recompilation by another version of QuickHDL patch to remain compatible.

The procedure can be performed by executing the script files, compile_vhdl_libs.sh and compile_verilog_libs.sh.

These scripts are located under $XILINX/mentor/data/vhdl and $XILINX/mentor/data/verilog respectively. Refer to the README file for detailed directions.

Synopsys Interface

Verify that your .cshrc or setup file contains the following.

Note: $XILINX is the directory for all Xilinx software. $SYNOPSYS is the directory for the Synopsys software.

```
setenv XILINX location_of_Xilinx_software
setenv SYNOPSYS location_of_Synopsys_software
set path=($SYNOPSYS/sparc/syn/bin \
      $SYNOPSYS/sparc/sim/bin \
      $XILINX/bin/platform \
      $XILINX/synopsys/bin/platform $path)
```

If you use VSS, you may need to maintain two installation directories. One directory includes the FPGA Compiler and VSS 3.4b; the other directory includes VSS 3.4b-VITAL. If you want to use both versions of VSS, you must switch your environment settings between these two directories.

Dual environment settings are not necessary when using Synopsys V3.5. VSS V3.5 combines VITAL support and support for other library formats in the same simulator package.

Cadence Interface Setup

For details about setting up your Cadence environment, refer to the "Getting Started" chapter in the *Cadence Interface/Tutorial Guide*.

Setting Up DynaText Variables and Preferences

The following section describes how to set up the variables and environment preferences for the DynaText browser.

The Xilinx collection of online documentation is located in the $XILINX/doc/usenglish directory. The DynaText Reader Guide is located in the $XILINX/data/dtext directory.

The browser is installed in the $XILINX/bin/*platform_name* directory. The DynaText environment is defined by the ebtrc file. There is an ebtrc file for each environment supported by the Xilinx software. The environment files are located in the $XILINX/bin/*platform_name* directories.

1. To use the appropriate setup file, you must set the $EBTRC environment variable. Set this variable as follows.

   setenv EBTRC $XILINX/bin/*platform_name***/ebtrc**

   The following is an example for a Solaris workstation.

   setenv EBTRC $XILINX/bin/sol/ebtrc

2. One of the following workstation variables must be set, depending on your particular platform. Instructions for setting up the following two variables are in the "Setting Up Xilinx Environment Variables" section.

   - SHLIB_PATH (for HP/UX)
   - LD_LIBRARY_PATH (for Solaris)

3. Set the platform variable as follows.

   setenv *platform_variable* **$XILINX/bin/***platform_directory*

4. Verify your DynaText browser setup by entering the following command.

   dtext

If the $EBTRC or $XILINX environment variables are not set correctly, DynaText returns the following error.

```
Your .ebtrc does not point to a valid DATA_DIR
```

To fix this error, verify that the environment variable is set correctly and that the path it references can be accessed from the machine running DynaText.

Some warning messages may be displayed on your screen. These warnings indicate missing font information and are due to the platform independence of the DynaText browser. Not all fonts are

available on all platforms, as shown in the following example. You can safely ignore these warnings.

```
Warning: Missing charsets in String to FontSet
conversion

Warning: Cannot convert string
"-dt-application-bold-r-*-*-*-140-*-*-p-*-*-*,-sgi-
screen-bold-r-*-*-*-160-*-*-m-*-*-*,-*-
lucidatypewriter-bold-r-*-*-*-120-*-*-*-*-*-*" to
type FontSet
```

You must use this browser to display any Xilinx online document. The DynaText online documentation is installed in the $XILINX/data/dtext directory. The browser for each platform is also installed in the sol and hp directories in $XILINX/bin.

Note: Even if you have installed the DynaText browser from a previous software release, you must install the new full-text browser. If you do not install the new browser, you may not be able to read the latest versions of the Xilinx online documents.

If you are running DynaText version 3.1 for the first time, cd to the **$XILINX/data/dtext** directory and read the following files before using the browser.

copyright.txt	The copyright protection notice
relnotes.txt	The release notes describe new DynaText features and enhancements. The notes also describe the system requirements for various platforms.

Setting Up Your DynaText Environment

The .ebtrc file sets up the DynaText environment. The HP platform requires different entries in the .ebtrc file than the Solaris platform. Xilinx has created the required ebtrc file for the platforms. These ebtrc files are located in $XILINX/bin/sun and $XILINX/bin/hp.

If you did not set up your system to use one of these files during installation, you need to do so. There are two methods for setting up your environment to use the appropriate file, as follows.

- Copy the ebtrc file for your platform to $HOME from **$XILINX/bin/*platform*** for each user. Rename the file **.ebtrc**.

  Following is an example using the EBTRC file for Solaris.

```
cd $HOME

cp $XILINX/bin/sol/ebtrc ./.ebtrc
```

- Set up the environment variable EBTRC in the .cshrc file to point to the ebtrc file for your platform for each user. Following is an example for setting up the environment for Solaris.

  ```
  setenv EBTRC $XILINX/bin/sol/ebtrc
  ```

  Source the new .cshrc file (**source .cshrc**).

Customizing the .ebtrc File

You can customize several DynaText variables by altering the ebtrc file. Following is an example file for Solaris users.

```
# .ebtrc configuration file
############################
COLLECTION      $XILINX/doc/usenglish=Xilinx Books
COLLECTION      $XILINX_CD/doc/usenglish=Xilinx Books on CD
COLLECTION      $XILINX/userware/utilities=Answers
COLLECTION      $XILINX_CD/userware/utilities=Answers on CD
COLLECTION      $XILINX/data/dtext/ebtdocs/ebrowse=DynaText 3.1 Browser
Documentation
COLLECTION      $XILINX/data/dtext/ebtdocs/sampdoc=DynaText 3.1 Sample
Books

DATA_DIR        $XILINX/data/dtext/data
X_DIR           $XILINX/data/dtext/data/X11
REGISTRY        $XILINX/data/dtext/data/ebtcom.txt
LIBRARY_PATH    $XILINX/bin/sun
DTEXT_AUTH      $XILINX/data/dtext/data/security/full_bro
PUBLIC_DIR      ~/tmp/ebtpub
PRIVATE_DIR     ~/tmp/ebtpriv
BACKGROUND_ANNOTS 1

PLUGIN_DIRS     $XILINX/bin/sun/plugin
#DTEXT_PLUGINS
```

Following is a description of the variables required for successful operation of the DynaText browser.

COLLECTION	Set to the directory or directories where the Xilinx and DynaText books are located. The name as it appears in the DynaText Library window is set by using the equal sign followed by the book name.
DATA_DIR	Set to the location of the EBT data files ($XILINX/data/dtext/data).
X_DIR	Set to the directory where the DynaText X defaults and fonts are located. ($XILINX/data/dtext/data/X11).
REGISTRY	Set to the directory where the ebtcom.txt file is located
LIBRARY_PATH	Set to the directory where the library DLL files are located.
DTEXT_AUTH	This variable is set to the authorization key.
PUBLIC_DIR	Sets up public annotations. The default is ~tmp/ebtpub.
PRIVATE_DIR	Sets up private annotations. The default is ~tmp/ebtpriv.
PLUGIN_DIRS	Set to the directory where the plugin files are located.

If you only want to view the Xilinx online documentation on the CD, set the EBTRC environment variable to the following path:

```
setenv EBTRC $XILINX_CD/bin/platforn/ebtrc_cd
```

The variable $XILINX_CD defines the path to the CD-ROM or network where the Xilinx online documents are located.

Using the XKeysymDB file

You must set an environment variable, XKEYSYMDB, if you are using a Motif version of DynaText. If you have not already set up this variable, see the "Setting Up Xilinx Environment Variables" section for details.

Adding a Printer

To select a printer, click **File** → **Preferences** → **Printers** from the DynaText Library window. A list of printers displays.

To add a printer to the list, add the following line to the $XILINX/data/dtext/data/ps/config.dat file

```
<SPOOLER name=newprinter width=width height=height command="lpr -Pnewprinter">
```

The *newprinter* is the name of the printer you want to display in the **File** → **Preferences** → **Printer** pull-down menu.

The *width* is the number of points that fit on the width of a page, for example, 612.

The *height* is the number of points that fit on the length of a page, for example, 792.

The command **lpr -P** *newprinter* is the UNIX command line required to print to the printer.

Chapter 7

Installing Alliance on PCs

This chapter describes how to install the Alliance software on PCs. The chapter is comprised of the following main sections.

- "Installation Changes for This Release"
- "Installing Alliance Series 1.5 Software"
- "Registry Settings Installation Options"
- "Verifying Xilinx Environment Variables"
- "Installing Online Documentation and the DynaText Browser"
- "Setting Up the DynaText Browser"
- "Installing The Xilinx CORE Generator"
- "Installing The CAE Libraries"
- "Shared DLLs"
- "Uninstalling Xilinx Software"

Installation Changes for This Release

If you already have former versions of Xilinx software loaded onto your machine or network, make sure you read the following section, which describes the changes made to the installation process for this release.

- The Implementation Tools files are compressed on the CD-ROM. You do not need to have a specific file decompression program loaded onto your system. The installation program will automatically decompress the files. You are no longer able to execute the software directly from the CD-ROM.

- Xilinx software security has changed for the 1.5 Release. During installation, you will be asked to enter your CD key number. This number is on the back of your Implementation Tools CD-ROM case.

Warning: The Alliance 1.5 default directory name is the same as Alliance 1.4. If you install to this directory, your 1.4 software will be overwritten. However, if you are also deleting or overwriting installations previous to Alliance 1.4, you may need to remove some files and icons manually.

Installing Alliance Series 1.5 Software

This section explains how to install the design implementation software on a Windows NT 4.0 or Windows 95 system. The Design Implementation Tools CD contains Base and Standard installation tools. You must run the installation program once for each platform you wish to install.

During installation, changes are made to the Registry. Refer to the "Registry Entries" appendix for details. You can choose whether you want to set up the XILINX and XILINX_CD variables. For Windows NT, these variables are set up in the Registry. For Windows 95, these variables are set up in the autoexec.bat file.

Note: If you have a dual boot system, that is, you can boot either Windows 95 or Windows NT, registry changes are made only for the Window system from which you are installing the Xilinx software.

Warning: No items are uninstalled when installing software.

If you are running an NT system, you must have System Administrator permissions to make changes to the Registry when you install the software.

Initial Installation Steps

Following are the steps that every user must perform in order to begin installing Alliance 1.5 software. Your secondary installation tasks depend on the type of install that you choose.

1. Verify your system compatibility and available hard disk space.

   Ensure that your system meets the requirements described in the "System Requirements" chapter.

2. Exit all Windows programs.

3. Insert the CD-ROM and run the Setup file.

   Insert the "Design Implementation Tools-PC" CD into your CD-ROM drive. Determine the source drive letter, *drive*, for example, d. Select **Start** → **Run**. Type *drive*:**setup.exe** in the Open field of the Run window and click **OK**.

4. The "Software License Agreement" window appears.

   Read the Software License Agreement and click **Yes** to accept the terms and continue with installation. Click **No** to cancel the installation program.

5. The "User Information" window appears.

   Enter your name, your company name, and your CD key code in the appropriate dialog boxes. Your CD key number is on a sticker attached to the CD-ROM case. Click **Next** to continue.

6. The "Type of Install" window appears.

   Choose your installation type by clicking the bullet next to one of the three choices: "Typical" (default), "Device Download Tools Only", or "Network Install." Click **Next** when you have made your selection.

   The final steps of your installation process are determined by your installation type. The following list tells you which section to turn to in order to complete your software installation.

- Typical Install: proceed to the "Typical Install" section.
- Device Download Tools Only: proceed to the "Device Download Tools Only Installation" section.
- Network Install: proceed to the "Network Installation" section.

Typical Installation

This section details the Typical Installation procedure. This section assumes that you have completed the steps in the "Initial Installation Steps" section.

1. The "Choose Destination Location" window appears

   Choose the folder that will be used for Alliance 1.5 software. The default folder is C:\Xilinx. To choose a different folder, click the **Browse** button. Click "next" when you are finished. It will take a brief period of time for the Installation program to load the next screen.

Warning: If you have installed Alliance 1.4 software and do not specify a directory other than C:\Xilinx, the Alliance 1.5 software will automatically overwrite the 1.4 version.

2. The "Select (Base/Standard) Implementation Devices" window appears.

   The title of this screen will reflect your software package type, either "Base" or "Standard."

   The "Components" box lists each device available to you. Select the devices that you wish to install by clicking on the checkbox next to the device name. Deselect components by clicking the checkbox a second time.

   The "Description" area gives details about the software component that is hilighted above. The disk space required to install each component appears when you select it.

   If you select a component that has sub-components, the **Change** button in the Description area is automatically hilighted. Click this button to bring up the "Select Sub-Components" window. This window allows you to select or deselect individual sub-components of each device. Click **Continue** to return to the "Select Implementation Devices" window when you are finished.

   At the bottom of the "Select Implementation Devices" window, the "Space Required" area keeps a tally of the total space that will be required for you to install the selected components onto your system. The "Space Available" section shows how much free space is currently available on your system.

Note: The "Alliance Series 1.5 Installation Requirements" section of the "System Requirements" chapter lists the disk space required to install each component.

Note: If you choose to install the DynaText online book browser from your Design Implementation Tools CD-ROM, make sure to set up the appropriate environment variables, as described in the "Setting Up the DynaText Browser" section.

   Click **Next** when you have finished selecting devices.

   No devices are selected by default. If you do not select any devices for installation, the "No Components Selected" window will appear. You can click the **Back** button to go back and select

devices, the **Next** button to continue without installing any components, or **Cancel** to exit the installation program.

3. The "Select Program Folder" window appears.

   This window allows you to name the program folder to which your Xilinx program icons will be added. The default name for this folder is "Xilinx Alliance." You can type in a new name, or select a folder from the list of existing program folders. The "Programs" folder is accessed from the "Start" button of Windows 95 and NT systems.

   Click **Next** when you are ready to continue.

4. The "Registry Settings Options" window appears.

   This window allows you to select which Registry entries will be created or updated in your system when you install the software.

   See the "Registry Settings Installation Options" section for a description of the available options. The "Registry Entries" appendix details the Registry Entries and keys which are created during installation.

   Click **Next** when you have made your selections and are ready to continue.

5. The "Start Copying Files" window appears.

   This window allows you to review the settings and devices that you have chosen for installation.

   If you need to change your options, click the **Back** button until you have reached the appropriate screen(s). Once you have finished making the changes, click **Next** until you are at the "Start Copying Files" window

   When you are satisfied with your installation options, click **Next** to begin installation.

Note: This screen is the last chance you have to cancel the installation. Click **Cancel** if you wish to abort before installing.

6. An installation window appears, showing the status of your install. A status bar indicates the percentage of installation that has been completed. Above the status bar is a listing of the respective folders where the files are being installed.

When the initial installation is complete, windows display indicating that the Registry files and Icons are being updated.

7. The "Setup Complete" window appears.

   This window allows you to select whether you view the README file. Xilinx recommends that you view the README file.

   Click **Finish** to complete Setup.

8. The Install program closes, and the README file is opened.

   The install program uses the accessory WORDPAD.EXE to call up the README files that are created on both the Alliance Release and the Documentation CD. The WordPad program is installed by default when your Windows operating system is installed.

   Check the README file to see if any high-profile known issues affect your user setup.

Your initial installation process is complete. Refer to the "Verifying Xilinx Environment Variables" section for more instructions. When you have set up your variables, refer to the "Getting Started" chapter for instructions on opening and using your Alliance software tools.

Device Download Tools Only Installation

This section details the installation process for users who plan only to download particular tools or use a lab machine setup. This section assumes that you have completed the steps in the "Initial Installation Steps" section.

1. The "Choose Destination Location" window appears

   Choose the folder that will be used for Alliance 1.5 software. The default folder is C:\Xilinx. To choose a different folder, click the **Browse** button. Click **Next** when you are finished. It will take a brief period of time for the Installation program to load the next screen.

Warning: If you have installed Alliance 1.4 software and do not specify a directory other than C:\Xilinx, the Alliance 1.5 software will automatically overwrite the 1.4 version.

2. The "Select Software Components to Install" window appears.

The following table shows the components available for this installation type.

Component Name	Required Disk Space
Hardware Debugger	~2.5 MB
PROM File Formatter	~2.1 MB
JTAG Programmer	~2.9 MB

All three components are selected by default. To deselect items, click on the checkbox next to the component name. Re-select components by clicking the appropriate checkbox a second time.

The "Description" area gives details about the software component that is hilighted above.

At the bottom of the window, the "Space Required" area keeps a tally of the total space that will be required for you to install the selected components onto your system. The "Space Available" section shows how much free space is currently available on your system.

Click **`Next`** when you are ready to continue.

3. The "Select Program Folder" window appears.

   This window allows you to name the program folder to which your Xilinx program icons will be added. The default name for this folder is "Xilinx Alliance." You can type in a new name, or select a folder from the list of existing program folders. The "Programs" folder is accessed from the "Start" button of Windows 95 and NT systems.

   Click **`Next`** when you are ready to continue.

4. The "Registry Settings Options" window appears.

   This window allows you to select which Registry entries will be created or updated in your system when you install the software.

   See the "Registry Settings Installation Options" section for a description of the individual options. The "Registry Entries" appendix details the Registry Entries and keys which are created during installation.

   Click **`Next`** when you have made your selections and are ready to continue.

5. The "Start Copying Files" window appears.

   This window allows you to review the settings and devices that you have chosen for installation.

   If you need to change your options, click the **Back** button until you have reached the appropriate screen(s). Once you have finished making the changes, click **Next** until you are at the "Start Copying Files" window.

   When you are satisfied with your installation options, click **Next** to begin installation.

Note: This screen is the last chance you have to cancel the installation. Click **Cancel** if you wish to abort before installing.

6. An installation window appears, showing the status of your install. A status bar indicates the percentage of installation that has been completed. Above the status bar is a listing of the respective folders where the files are being installed.

   When the initial installation is complete, windows display indicating that the Registry files and Icons are being updated.

7. The "Setup Complete" window appears.

   This window allows you to select whether you view the README file. Xilinx recommends that you view the README file.

   Click **Finish** to complete Setup.

8. The Install program closes, and the README file is opened.

   The install program uses the accessory WORDPAD.EXE to call up the README files that are created on both the Alliance Release and the Documentation CD. The WordPad program is installed by default when your Windows operating system is installed.

   Check the README file to see if any high-profile known issues affect your user setup.

Your initial installation process is complete. Refer to the "Verifying Xilinx Environment Variables" section for more instructions. When you have set up your variables, refer to the "Getting Started" chapter for instructions on opening and using your Alliance software tools.

Network Installation

Select this option if you plan to access the Alliance software from the network. The option does not copy any files to your system; it makes changes to your Registry and adds icons to your selected "Start" menu folder.

This section assumes that you have completed the steps listed in the "Installing Alliance Series 1.5 Software" section.

1. The "Choose Network Location" window appears.

   This window allows you to choose where the Alliance 1.5 software will be installed on your network. The default location is shown in the "Destination Folder" section. To change the installation location, click **Browse** and select another folder.

Warning: If you have installed Alliance 1.4 software and do not specify a directory other than C:\Xilinx, the Alliance 1.5 software will automatically overwrite the 1.4 version.

   Click **Next** when you are ready to continue.

2. The "Select Program Folder" window appears.

   This window allows you to name the program folder to which your Xilinx program icons will be added. The default name for this folder is "Xilinx Alliance." You can type in a new name, or select a folder from the list of existing program folders. The "Programs" folder is accessed from the "Start" button of Windows 95 and NT systems.

   Click **Next** when you are ready to continue.

3. The "Registry Settings Options" window appears.

   This window allows you to select which Registry entries will be created or updated in your system when you install the software.

   See the "Registry Settings Installation Options" section for a description of the available options. The "Registry Entries" appendix details the Registry Entries and keys which are created during installation.

   Click **Next** when you have made your selections and are ready to continue.

4. The "Start Copying Files" window appears.

This window allows you to review the settings and devices that you have chosen for installation.

If you need to change your options, click the **Back** button until you have reached the appropriate screen(s). Once you have finished making the changes, click **Next** until you are at the "Start Copying Files" window.

When you are satisfied with your installation options, click **Next** to begin installation.

Note: This screen is the last chance you have to cancel the installation. Click **Cancel** if you wish to abort before installing.

5. An installation window appears, showing the status of your install. A status bar indicates the percentage of installation that has been completed. Above the status bar is a listing of the respective folders where the files are being installed.

   When the initial installation is complete, windows display indicating that the Registry files and Icons are being updated.

6. The "Setup Complete" window appears.

   This window allows you to select whether you view the README file. Xilinx recommends that you view the README file.

   Click **Finish** to complete Setup.

7. The Install program closes, and the README file is opened.

   The install program uses the accessory WORDPAD.EXE to call up the README files that are created on both the Alliance Release and the Documentation CD. The WordPad program is installed by default when your Windows operating system is installed.

   Check the README file to see if any high-profile known issues affect your user setup.

Your initial installation process is complete. Refer to the "Verifying Xilinx Environment Variables" section for more instructions. When you have set up your variables, refer to the "Getting Started" chapter for instructions on opening and using your Alliance software tools.

Warning: You cannot run uninstall from a system that you did a network install on. If you run uninstall from the system you have set

up to point to an existing environment, uninstall will delete that existing environment. Make sure that you clean up your environment paths which point to network sources.

Registry Settings Installation Options

The "Registry Settings Options" installation dialog box lets you select default option settings for environment variables, your path, and the Registry. Following is a description of each option.

a) Set/Update XILINX in the Registry

You must set the XILINX variable to run the Alliance software. The XILINX variable is set to point to C:\Xilinx as the default or the directory you selected from the Select Alliance Destination Directory screen display.

For Windows NT, the XILINX variable is set in the Registry. For Windows 95, this variable is set in the autoexec.bat file.

If you are installing to a network, the value of the XILINX variable is set to your selection from the "Choose Network Location" screen display.

b) Set/Update XILINX_CD in the Registry

If this option is selected, the XILINX_CD variable is set to point to the directory from which the installation is being run as the default. If you are performing a Network Installation, the XILINX_CD variable is set to the directory that you choose from the "Choose Network Location" screen display. For Windows NT, the XILINX_CD variable is set in the Registry. For Windows 95, this variable is set in the autoexec.bat file.

The XILINX_CD variable is used to locate the DynaText online documentation.

c) Set/Update Path in the Registry

If this option is selected, the location of the Xilinx software and the DLLs are added to your PATH. For Windows NT, the

PATH variable is set in the Registry. For Windows 95, the PATH is set in the autoexec.bat file.

d) Initialize OLE Registry settings

OLE (Object Linking and Embedding) software enhances the transfer of data between programs (for example, between the Design Manager and EPIC editor). Xilinx recommends that you select this option. You can also initialize OLE settings by running the command, **`revengine /REGISTER`**, at a command line prompt from the $XILINX\bin\nt directory.

e) Initialize Books Viewer Registry settings

These settings must be loaded in the Registry to execute the DynaText browser. See the "Online Documentation" section of the Registry Entries appendix for a list of the registry settings. You can also initialize the browser registry settings by double-clicking the file ebtcom.reg. This file is located in $XILINX\bin\nt.

f) Initialize driver for Parallel Cable III

This selection adds registry values to activate the driver so that you can use the Xilinx download cable. Make sure this option is selected if you are designing with CPLDs.

g) Create environment settings file

The xilinx.cmd file, which is created during installation, contains the settings for the XILINX, XILINX_CD, and PATH, variables. The file is located in $XILINX.
If necessary, you can double-click on this file to set these variables.

Verifying Xilinx Environment Variables

After you have installed Alliance 1.5, verify that the following variables are set properly. You must set the XILINX and PATH variables for the Xilinx software to run correctly. Set these variables as follows.

```
set XILINX=c:\xilinx
set PATH=c:\xilinx\bin\nt;%PATH%
```

These variables are set to the C:\XILINX directory, which is the default path for the Xilinx Implementation Tools. If you change the

default path, you must change the environment variables to match the new path.

Setting Variables with Windows NT

To set the XILINX and PATH variables on a PC with Windows NT 4.0, follow these steps.

1. Select **Start** → **Settings** → **Control Panel**.
2. Double click on the System icon and select the Environment tab. Verify that the settings shown previously are listed in either the System Variables section or in the User Variables section. They may not appear exactly as previously shown; the variable may be under the Variable header and the path may be under the Value header. The word "set" does not appear.

Setting Variables with Windows 95

To set the XILINX and PATH variables on a PC with Windows 95, follow these steps.

1. Run SYSEDIT to open the AUTOEXEC.BAT file.
2. Verify the environment settings are as previously shown.

Variables for PERL Users

The Xilinx installation program places a copy of Perl 5™ at the top of your directory path. If you already have a version of Perl on your system, and you wish to override Perl 5, type the following to delete "perl" from your bin directory.

```
del %XILINX%\bin\nt\perl.exe
```

If you choose not to delete Perl 5 and still wish to use your own version of Perl, ensure that the path to the Perl bin directory precedes the path to the Xilinx directory tree.

Installing Online Documentation and the DynaText Browser

This section describes how to install the DynaText browser and the Xilinx online documentation from the Alliance Series Documentation

CD-ROM. You must install the DynaText browser in order to read the online book collection.

Warning: This section assumes that you have already installed the Alliance Series 1.5 software. You must use the same destination directory for both the Alliance software, the Xilinx online documentation, and the DynaText browser.

The CD contains the following components.

- Xilinx online manuals
- EBT books (DynaText tutorial manuals)
- DynaText browser

Note: Descriptions of the Xilinx online books are included in the "Xilinx Documentation Overview" section of the "Getting Started" chapter.

During installation, changes are made to the Registry. Refer to the "Registry Entries" appendix for details. You must have System Administrator permissions to make changes to the Registry when you install the software.

Note: If you have a dual boot system, that is, you can boot either Windows 95 or Windows NT, registry changes are made only for the Window system from which you are installing the Xilinx software.

Note: If you have installed the DynaText browser from a previous software release, check that you are running DynaText version 3.1. Otherwise, you will not be able to read the latest versions of the online documentation.

The following list details the installation procedure.

1. Ensure that your system meets the requirements described in the "System Requirements" section. You should close all other Windows applications before installing software.
2. Insert the Alliance Series 1.5 Documentation CD-ROM into your CD-ROM drive. The installation program should start automatically.

   If the setup screen does not appear, determine your source drive letter, *drive*, for example, d. Select **`Start`** → **`Run`**. Type *drive*`:setup.exe` in the Open field of the Run window and click OK.

3. The "Welcome" screen appears. Read the instructions and press **Enter**.

4. The "Select Type of Installation" screen appears. Following are your two installation options.

   - Typical Installation

     Select this option to install the Xilinx online documents, the EBT books, the DynaText browser, and the online book files onto your hard disk drive. You must install the documents in the same directory that you installed the Design Implementation Tools software.

     In the Select Documents to Install window, you must click *on* the check mark to deselect the document. You can reselect a component by clicking the blank space to the left of the document name.

   - Run from CD or Network

     Select this option if you plan to access documentation from the CD or from the network.

     If you are performing a Run from CD or Network installation and you select a Destination Directory on your network, the documents will not be installed on the disk drive; they will only be accessible through the network.

   When you have selected your installation type, press **Enter** to continue.

5. The "Choose Destination Location" window appears

   Choose the folder that will be used for the documentation and browser. The default folder is C:\Xilinx. To choose a different folder, click the **Browse** button. Click **Next** when you are finished. It will take a brief period of time for the Installation program to load the next screen.

Warning: You must install the browser and documentation in the same directory as the Alliance 1.5 software.

6. The "Select Software Components to Install" window appears.

   The "Components" box lists each online book and software component available to you. Select the files that you wish to

install by clicking on the checkbox next to the device name. Deselect components by clicking the checkbox a second time.

The "Description" area gives details about the software component that is hilighted above. The disk space required to install each component appears when you select it.

If you select a component that has sub-components, the **Change** button in the Description area is automatically hilighted. Click this button to bring up the "Select Sub-Components" window. This window allows you to select or deselect individual sub-components of each device. Click **Continue** to return to the "Select Software Components" window when you are finished.

At the bottom of the window, the "Space Required" area keeps a tally of the total space that will be required for you to install the selected components onto your system. The "Space Available" section shows how much free space is currently available on your system.

Note: The "Online Documentation Installation Requirements" section of the "System Requirements" chapter lists the disk space required to install each component.

Click **Next** when you have finished selecting devices.

No devices are selected by default. If you do not select any devices for installation, the "No Components Selected" window will appear. You can click the **Back** button to go back and select devices, the **Next** button to continue without installing any components, or **Cancel** to exit the installation program.

7. The "Select Program Folder" window appears.

   This window allows you to name the program folder to which your DynaText program icon will be added. The default name for this folder is "Xilinx Alliance." You can type in a new name, or select a folder from the list of existing program folders. The "Programs" folder is accessed from the "Start" button of Windows 95 and NT systems.

   Click **Next** when you are ready to continue.

8. The "Registry Settings Options" window appears.

   This window allows you to select which Registry entries will be created or updated in your system when you install the software.

See the "Registry Settings Installation Options" section for a description of the available options. The "Registry Entries" appendix details the Registry Entries and keys which are created during installation.

Click **Next** when you have made your selections and are ready to continue.

9. The "Start Copying Files" window appears.

   This window allows you to review the settings and devices that you have chosen for installation.

   If you need to change your options, click the **Back** button until you have reached the appropriate screen(s). Once you have finished making the changes, click **Next** until you are at the "Start Copying Files" window

   When you are satisfied with your installation options, click **Next** to begin installation.

Note: This screen is the last chance you have to cancel the installation. Click **Cancel** if you wish to abort before installing.

10. An installation window appears, showing the status of your install. A status bar indicates the percentage of installation that has been completed. Above the status bar is a listing of the respective folders where the files are being installed.

    When the initial installation is complete, windows display indicating that the Registry files and Icons are being updated.

11. The "Setup Complete" window appears.

    Click **Finish** to complete Setup. Make sure that you set up the appropriate environment variables for DynaText. Refer to the "Setting Up the DynaText Browser" section for more instructions. When you have set up your variables, refer to the "Getting Started" chapter for instructions on starting and using DynaText.

Setting Up the DynaText Browser

The browser support files and the EBT online documentation are installed in %xilinx%\data\ntdtext unless specified otherwise. The Xilinx online documentation is installed in the %xilinx%\doc\usenglish\ books directory unless specified otherwise.

Your system must have the Dynamic-Link Library (DLL) file CTL3D32.DLL to run the DynaText browser. This file is usually found in the System32 subdirectory for NT or System subdirectory for Windows 95 under your Windows NT directory. There are two versions of the CTL3D32.DLL (CTL3D95.DLL for Windows 95 and CTL3DNT.DLL for Windows NT). See the "Installing Alliance Series 1.5 Software" section for a complete list of DLLs.

The following subsections discuss the XILINX environment variables and the dynatext.ini file.

Xilinx Environment Variables for DynaText

When you install the Xilinx Design Implementation Tools software, you can automatically set up various environment variables. The Registry for NT 4.0 can be set up with XILINX and XILINX_CD, and Windows 95 uses autoexec.bat. See the "Registry Entries" appendix for details. The XILINX variable is set to point to the path where the software is installed. The XILINX_CD variable points to the CD-ROM path, which is usually d: or to a directory on the network. The specific value of each of these variables is referenced in the dynatext.ini file. Following is an example of a dynatext.ini file. Environment variable substitution in the dynatext.ini file adheres to the UNIX convention of using the $ symbol, for example, $XILINX\data.

```
; dynatext.ini configuration file
; ****************************************
COLLECTION=$XILINX\data\ntdtext\ebtdocs\ebrowse=EBT Books
COLLECTION=$XILINX\doc\usenglish=Xilinx books
COLLECTION=$XILINX_CD\doc\usenglish=Xilinx books (CD)
COLLECTION=$XILINX/xbbs/userware/answers=Alliance Answers Book
DATA_DIR=$XILINX\data\ntdtext\data
```

If you decided not to set up the XILINX and XILINX_CD variables during install, then these variables have not been set up. In that case, the XILINX variable will be set to the directory in which you installed the software and the XILINX_CD variable will be set to the CD_ROM path, which is usually d: or to a directory on the network. The settings in the dynatext.ini file are shown below.

```
COLLECTION=C:$Xilinx\doc\data\ntdtext\ebtdocs\ebrowse=EBT Books
COLLECTION=C:$Xilinx\doc\data\doc\usenglish=Xilinx books
```

```
COLLECTION=$XILINX_CD\doc\usenglish=Xilinx books on CD
COLLECTION=$XILINX/xbbs/userware/answers=Answers
DATA_DIR=C:$Xilinx\doc\data\ntdtext\data
PUBLIC_DIR=C:$Xilinx\doc\data\ntdtext\tmp\public
PRIVATE_DIR=C:$Xilinx\doc\data\ntdtext\tmp\public
```

Customizing the dynatext.ini File

The dynatext.ini file, which is located in %XILINX%\bin\nt, sets up the DynaText environment. Normally, you do not need to alter any of your settings in the dynatext.ini file; however, you can customize several DynaText variables by altering this file. Following is a description of required variables.

COLLECTION	Set to the directory or directories where the Xilinx and DynaText books are located. The name as it appears in the DynaText Library window is set by using the equal sign to point to the collection directory path followed by another equal sign to point to the user-defined collection name.
DATA_DIR	Set to the location of the EBT data files $XILINX\data\ntdtext\data).
PUBLIC_DIR	Sets up public annotations. Must be a writable location.
PRIVATE_DIR	Sets up private annotations. Must be a writable location.

Installing The Xilinx CORE Generator

This section details how to install the Xilinx CORE Generator. This installation is optional. For a description of the CORE Generator, refer to the "Xilinx CORE Generator" section of the "Features in This Release" chapter.

Use the following procedure to install the CORE Generator software. For more information, refer to the install.txt file, located on the root directory of the CD-ROM.

1. Insert the CD-ROM labeled "CORE Generator" into your CD-ROM drive. You should close all other Windows applications before installing software.

2. Run the setup.exe program in the CD-ROM root directory.

   Xilinx recommends that you install the CORE Generator in the same directory as your Alliance 1.5 software.

3. The "Welcome" screen appears. Click **Next.**

4. The "Software License Agreement" screen appears. Read the agreement. If you choose to accept the agreement and continue with the installation, click **Next**.

5. The "LogiCORE License Agreement" screen appears. Read the agreement and click **Next** when you are ready to continue.

6. The "Select CORE Generator Destination Directory" screen appears. The default directory is C:\COREGen. If you wish to install CORE Generator to another directory, click **Browse**. When you have selected the destination directory, click **Next**.

7. The "Select Program Folder" screen appears. The program folder is accessed through the Windows "Start" button. The default name for the program icon is Xilinx CORE Generator. You can change the name of this folder by typing in your selection. When you are ready to continue, click **Next**.

8. The "Start Copying Files" window appears. Verify your installation choices. If you need to change any of your options, click **Back** until you have reached the appropriate screen. When you are ready to begin installation, click **Next**.

Note: The CORE Generator documentation is implemented in .pdf file format, and is read using the Adobe Acrobat Reader program. If Acrobat Reader is not already installed on your system, it will be installed automatically. Acrobat Reader is approximately 7.4 MB.

9. File installation begins. A status bar appears during installation.

10. The "CORE Generator Setup Complete" screen appears when your installation is complete. You are prompted to read the README file. Click **Next**.

11. The README file appears, using the Windows Wordpad application.

12. When you have finished installing the CORE Generator, remove the CD-ROM from the caddy.

Turn to the "Starting and Using the Xilinx CORE Generator" section of the "Getting Started" chapter for information about using the CORE Generator software.

You can also download new cores from the Xilinx web site. The Xilinx CORE Generator download page is at http://www.xilinx.com/products/logicore/coregen.

Installing The CAE Libraries

This section gives instructions on installing the CAE Libraries. Xilinx recommends that you install the Alliance 1.5 software tools and set your environment variables before attempting to install CAE Libraries.

1. Insert the CD-ROM labeled "CAE Libraries" into your CD-ROM drive. You should close all other Windows applications before installing software.
2. Run the setup.exe program in the CD-ROM root directory.

   Xilinx recommends that you install the CAE Libraries in the same directory as your Alliance 1.5 software.
3. Follow the directions and select the libraries that you wish to install. The "CAE Interface Installation Requirements" section of the "System Requirements" chapter details which libraries are available to you, as well as listing the disk space needed for each component.
4. When you have finished selecting and installing libraries, remove the CD-ROM from the caddy.

Shared DLLs

When you install Alliance Software tools, shared DLLs are also installed on your system. The shared DLLs are used for Unicode support, a 2-byte method of representing characters.

The following table shows the directory to which the DLLs are installed. An "x" in the directory column indicates that the DLL is installed to that directory. The "C:/Xilinx Alliance" is the default directory for Alliance 1.5 installation. If you did not install the Alli-

ance software to the default directory, the DLLs in this column are installed in the same directory in which you installed your software.

DLL Name	Installation Directory	
	$WINSYS	C:/Xilinx Alliance
MSVCRT40.DLL	x	
MFC40.DLL	x	x
MFC40U.DLL	x	x
CTL3D32.DLL	x	
OLEPRO32.DLL	x	
CTL3D.DLL		x
MFC42.DLL		x
MSVCIRT.DLL		x
MSVCRT40.DLL		x
OLEPRO.DLL		x

There are two versions of CTL3D32.DLL, CTL3D95.DLL for Windows 95 and CTL3DNT.DLL for Windows NT. When copied to the System32 directory (Windows NT) or the System directory (Windows 95) from the CD, the file is renamed as CTL3D32.DLL.

If there are versions of these DLLs already installed on your system, the Xilinx versions are not installed (no overwrite). If you do not have these installed, the Xilinx versions are installed in the System32 or System directory if the Shared DLLs option is selected. These DLLs are also copied to %XILINX%\ bin\nt if "Program Executables" is selected for installation. The two versions of CTL3D32.DLL (CTL3D95.DLL and CTL3DNT.DLL) are also copied to %XILINX%\bin\nt.

Uninstalling Xilinx Software

To uninstall Xilinx software, perform the following steps.

1. Double-click the My Computer icon.
2. Double-click the Control Panel icon.
3. Double-click the Add/Remove Programs icon.

4. Ensure that the Install/Uninstall tab is selected in the Add/Remove Program Properties window.
5. From the list, select the programs you want to remove and click Add/Remove.

Chapter 8

Setting up Security

This chapter explains the current security program for Alliance Series Software. In order to make Xilinx software easier to use, several dramatic changes have been implemented for the Alliance 1.5 release.

The following sections are in this chapter.

- "Security Changes for Alliance 1.5"
- "User Setup Instructions"

Security Changes for Alliance 1.5

Through the Alliance 1.4 release, security for the Alliance software release was implemented using the FLEXlm™ 5.12 license manager.

Xilinx has replaced the FLEXlm software licensing. Instead, both Base and Standard users have been provided with a numbered CD key. This key is used for software installation, and is located on the back of the jewel case.

You no longer need to contact Xilinx for additional security codes needed to install and use the Alliance Series software tools. Furthermore, you no longer need to set up the LM_LICENSE_FILE environment variables.

Note: In the past, FLEXlm was known as the Highland License Manager. For more information about FLEXlm, see the website, http://www.globetrotter.com.

User Setup Instructions

Following are instructions for both new and legacy Xilinx software users. Detailed installation instructions are located in the "Installing Alliance on Workstations" and "Installing Alliance on PCs" chapters.

Warning: Do not throw away your CD-ROM jewel case. The sticker on the case contains important installation codes.

New Users

1. Check the "System Requirements" chapter for a list of supported platforms, and make sure that you have enough disk space for installation.
2. Begin installing the software.
3. During the installation process, you will be asked to enter your registration number. Make sure to enter the correct code from the back of your CD-ROM jewel case.
4. Make sure to send in your software registration card. Once you are a registered user, Xilinx will send you software "Performance Pack" updates and newsletters.

Legacy Users

If you have previous versions of Xilinx software installed on your machine or network, perform the following steps to ensure that the M1.5 software is properly installed.

1. Check the "System Requirements" chapter for a list of supported platforms, and make sure that you have enough disk space for installation.
2. Install the Alliance 1.5 software. During the installation process, you will be asked to enter your registration number, which is located on the back of your CD-ROM jewel case.
3. After installing the Alliance software, you should be able to access all devices and programs available for your package (Base or Standard). You no longer need to set up LM_LICENSE_FILE variables for software operation.

Chapter 9

Getting Started

This chapter explains how to start the Alliance software on PCs and workstations, how to open and use the Xilinx CORE Generator, and how to open and use the DynaText online browser. Detailed descriptions of the Xilinx book collection are also included. The following sections are in this chapter.

- "Starting the Alliance Software"
- "Starting and Using the Xilinx CORE Generator"
- "Xilinx Documentation Overview"
- "Starting and Using the DynaText Browser"

Starting the Alliance Software

When you have installed the Design Implementation Tools and set up the your environment variables, you are ready to use the software.

If you fully installed the software, four icons are created in the Xilinx programs folder: Design Manager, DynaText browser, LogiBLOX and the README file. You can access various software tools in the following ways.

Starting the Design Manager

The Design Manager is the GUI program which controls your design entry, verification, and implementation process. To start the Design Manager, select the following.

- PC users: **`Start`** → **`Programs`** → **`Xilinx`** → **`Design Manager`**

  You can also access the Design Manager a second way. Open the Windows Explorer program and locate your installation directory. (The default directory is C:\Xilinx.) Go to the \bin\nt folder

and double-click the icon called "Design Manager" in your folder.

- UNIX users: type one of the two following commands at the command prompt

  dsgnmgr

  xilinx

Note: For Workstation users, the Windu registry entries for the Design Manager have changed from previous releases of Alliance software. You may need to update your registry in order to run a GUI application. See the "Registry Entries" appendix for more information.

For a complete description of the Design Manager, see the online document, *Design Manager/Flow Engine Reference/User Guide.*

Accessing Specific Design Implementation Tools

This section describes how to start other Alliance implementation tools, which include the Flow Engine, Floorplanner, Timing Analyzer, Prom File Formatter, EPIC Design Editor, Hardware Debugger, and JTAG Programmer programs.

Starting Tools Using Icons

The easiest way to start Design Implementation Tools such is through the Design Manager. Start Design Manager and perform either of the following steps.

- Double-click the appropriate tool's icon from the toolbar located on the right vertical side of the Design Manager window.
- Use the appropriate pull-down menu, as follows.

  Tools→ ***tool_name***

Starting Tools Using a Command Prompt

You can also access specific software tools, such as NGDBuild, PAR, and MAP, via the Command Line prompt. To display a Command Line Prompt, PC users can select the following.

Start → Programs→ Command Prompt

At the prompt, enter a specific command and its options. The online document, *Development System Reference Guide*, describes all Xilinx commands and options in detail.

Starting LogiBLOX

LogiBLOX is a graphical interactive tool for creating high-level modules, such as counters, shift registers, and multiplexers. LogiBLOX includes both a library of generic modules and a set of tools for customizing these modules.

To use LogiBLOX as a stand-alone utility, use the following directions.

- PC users: **`Start`** → **`Programs`**→ **`Xilinx Alliance`**→**`LogiBLOX`**
- UNIX users: enter the following command at your UNIX prompt.

  `lbgui`

LogiBLOX is also integrated into some third-party schematic entry tools (such as Workview Office), and can generate schematic symbols and appropriate simulation models.

The documentation for your schematic entry interface (for example. the *Viewlogic Interface/Tutorial Guide*) explains how to use LogiBLOX from your schematic editor.

Starting and Using the Xilinx CORE Generator

This section gives instructions on how to start and use the Xilinx CORE Generator, and how to access the CORE Generator online documentation.

Starting COREGenerator

- Workstation Users

  Type **`coregen`** at the UNIX prompt.

- PC Users

  When you install the CORE Generator, two icons are created in your programs folder, which is accessed through the "Start" button. The two icons are "Xilinx CORE Generator" and

"README." To start CORE Generator, click the following buttons.

Start → Programs→ Xilinx CORE Generator

Using CORE Generator

This section describes how to access and use the basic functions of the CORE Generator. For detailed information about using the CORE Generator, refer to the "Accessing CORE Generator Documentation" section.

When you start the CORE Generator, two windows appear. The windows are called "CORE Generator Options" and "CORE Generator (Main Menu)."

The "CORE Generator Options" window allows you to choose the output forms of your core configuration, such as VHDL, Verilog, or a netlist.

The "CORE Generator (Main Menu)" window allows you to choose libraries and cores. The "CORE Generator Library" section of this window has two library options: LogiCORE and AllianceCORE.

Clicking the **LogiCORE** button opens the Xilinx library of cores for your use. Clicking the **AllianceCORE** button gives information about the available libraries of Xilinx vendor partners. The AllianceCORE section provides data sheets and vendor contact information.

Note: For more information about libraries offered by Alliance vendor partners, use the information in the AllianceCORE window to contact the vendor directly.

The following steps briefly describe how to select and implement your cores.

1. Choose a core from the LogiCORE or AllianceCORE windows by clicking to select it.
2. The next window prompts you to define and enter your COREs' paramaters.
3. Click the **Generate** button to begin optimization of your core. Output files include a Xilinx netlist, a VHDL or Verilog instantiation mode, a VHDL behavioral model, and a symbol for use with your schematic capture tools.

Accessing CORE Generator Documentation

Data sheets for Xilinx cores and information about using the CORE Generator are available when you have installed the CORE Generator software. The following list describes how to access this information.

- Data Sheets for Xilinx Cores

  From the LogiCORE library window, select a component or core by clicking on it. You can read the data sheets with Acrobat Reader, which is opened automatically when you access the data sheets with either of the two following methods.

  - Click the green "Spec" icon, which is located in the upper left corner of the window that shows the your selected core.
  - From the Help pulldown menu (located on the top toolbar), select **`Spec sheet`**. The appropriate spec sheet for your selected core appears.

- CORE Generator User's Guide

  The User's Guide is read using Acrobat Reader, which will be opened automatically when you open the online book, as follows.

  From pulldown menu area of the "CORE Generator (Main Menu)" window, select **`Help→ User's Guide.`**

You can also download new cores from the Xilinx web site. The Xilinx CORE Generator download page is at http://www.xilinx.com/products/logicore/coregen.

Xilinx Documentation Overview

This section describes the DynaText online browser and the books available for Alliance 1.5 software.

DynaText Online Browser Overview

The DynaText online browser must be installed on your system in order for you to access the Xilinx documentation. You can also access DynaText's own online documentation while using the browser.

Each set of online books for Alliance software and the DynaText browser is organized into a collection. The books and collections are displayed within the "DynaText Library" window after you open the

DynaText software. The following section describes the instructional books available with DynaText.

Instruction Manuals for DynaText Users

Several instruction books are provided for the DynaText user. The *DynaText Reader's Guide* explains how to use the DynaText browser to view online documents and perform searches. The *Reader's Guide* is accessed through the Help pulldown menu in the DynaText library window.

The *DynaText Features Book* describes the features of the DynaText publishing system. The *Shuttle Press Kit* is a sample book implemented in DynaText.

See the "Opening and Using the DynaText Browser" section for more instructions on accessing these books.

Xilinx Book Types

There are several different types of books included in the Xilinx collection, as shown in the following list.

- **Quick Start Guides** give instruction on how to use your Alliance software tools, as well as providing setup information for CAE interfaces.
- **User Guides** describe modules that are part of the Xilinx Development System. They include overviews of the Xilinx environment and procedures, as well as design tips.
- **Interface User Guide**s describe how to translate and simulate a design in the Xilinx environment from another CAE design tool, such as Mentor Graphics or Viewlogic.
- **Reference Guides** list and describe all the commands, options, and variables used in the Xilinx Development System.
- **User/Reference Guides** combine the procedural and background information in the user guides with the command information in the reference guides.
- **Library Guides** include information on all primitives, macros, and building blocks, as well as detailing space consumption for your chips.

- **Design Guides** address the global subjects of designing with FPGAs, CPLDs, and Xilinx software.

Xilinx Online Book Descriptions

The following section describes each book in the Alliance 1.5 documentation collection.

Alliance Series Quick Start Guide

The *Alliance Series Quick Start Guide* provides an overview of the features and additions to Xilinx's newest product software. This book details how to use the M1.5 software, and includes sections detailing CAE interface setup for use with Xilinx devices

Development System User Guide

This guide contains information you need during the FPGA development process. It contains an overview of the design entry, design implementation, and design verification process, for device configuration. This book focuses on the Xilinx Alliance M1.5 Software.

Hardware User Guide

This manual describes the Xilinx hardware components and associated software interfaces. The hardware includes FPGA and CPLD demonstration boards, which are used for design verification, and various download cables. The book also provides detailed connection and configuration information for the hardware.

Constraints Editor User Guide (Beta Version Document)

The *Constraints Editor User Guide* describes the Xilinx graphical user interface (GUI) that can be used after running the NGDBuild program to create new constraints.

Cadence Interface/Tutorial Guide

This guide explains how to use the Cadence Concept schematic editor with the Xilinx software. The guide also explains how to generate a symbol/body for LogiBLOX modules within Concept, how to convert Concept Verilog output files to EDIF files with

CONCEPT2XIL, and how to conduct functional and timing simulations.

Mentor Graphics Interface/Tutorial Guide

This guide explains how to use the Mentor Graphics interface software with Xilinx software. There is also information on using the Mentor Graphics Design Manager interface, which is configured for the design, simulation, and implementation of Xilinx Programmable Logic Devices (PLDs).

Viewlogic Interface/Tutorial Guide

This book explains how to use the Viewlogic interface software to translate your FPGA or CPLD designs from Viewlogic schematics to implemented design and simulation files.

Synopsys (XSI) Interface/Tutorial Guide

This manual describes the Xilinx Synopsys Interface (XSI™)program, a tool that allows you to implement Field Programmable Gate Array (FPGA) designs using either the Synopsys FPGA Compiler or Design Compiler synthesis tools.

Development System Reference Guide

This book describes individual components of the Xilinx Development System software, which includes programs to generate EDIF files and BIT files used primarily for FPGA architectures. The book covers all the program options, syntax, and input and output files that are generated by these programs.

JTAG Programmer Guide

This book describes Xilinx's JTAG Programmer software, a tool used for in-system programming. You can use this software in conjunction with download cables for downloading, reading back, and verifying design configuration data. The book also describes how to perform functional tests of your devices and how to probe internal logic states of a CPLD design.

Design Manager/Flow Engine Reference/User Guide

This manual describes the Design Manager, a tool used to manage implementations of a given design. This manual also explains the Flow Engine, which implements designs, and explains how to interact with other programs that run in the Design Manager environment; namely, the Floorplanner, the Timing Analyzer, the Hardware Debugger, the PROM File Formatter, and the JTAG Programmer.

EPIC Design Editor Reference/User Guide

The *EPIC Design Editor Reference/User Guide* describes the functions of EPIC (Editor for Programmable ICs), which is a low level graphical editor program. EPIC enables you to place and route critical components before running automatic place and route tools on an entire design. You can also modify placement and routing manually, interact with the physical constraints file (PCF) to create and modify constraints, and verify timing against constraints using this program.

LogiBLOX Reference/User Guide

The *LogiBLOX Reference/User Guide* describes the LogiBLOX (blocks of logic optimized for Xilinx™) synthesis tool, which consists of a library of modules you can use to describe a system by means of high-level functions instead of gate-level primitives. This book also explains how to use the LogiBLOX program to create designs.

Floorplanner Reference/User Guide

This manual describes how to use the Xilinx Floorplanner, a graphically based tool that allows you to interactively and automatically place logic symbols from a hierarchical design into a Xilinx target FPGA.

Hardware Debugger Reference/User Guide

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.

Timing Analyzer Reference/User Guide

This manual describes Xilinx's Timing Analyzer program, a graphical user interface tool that performs static analysis of a mapped FPGA or CPLD design. The mapped design can be partially or completely placed, routed, or both.

PROM File Formatter Reference/User Guide

This manual explains how to use the PROM File Formatter graphical interface tool. This program allows you to format bitstream files into HEX format files which are compatible with Xilinx and third-party PROM programmers. You can 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).

Libraries Guide

This book describes the components or macros that you use to create your designs as well as the attributes and constraints used to process your design during logic implementation. The *Libraries Guide* also discusses relationally placed macros (RPMs). These macros contain relative location constraints (RLOC) information. The Xilinx unified libraries enable you to convert designs easily from one device family to another.

CPLD Schematic Design Guide

This guide covers design techniques for schematic entry tools. It also includes information to embed behavioral modules and migrate designs between different families.

This book provides information on using the CPLD fitter and supported CAE interfaces to create schematic-based designs for Xilinx CPLD devices. It focuses on schematic design techniques, including using library components in schematics.

CPLD Synthesis Design Guide

This guide describes the CPLD synthesis design process when using the Xilinx Synopsys Interface (XSI) with the Xilinx XC9000 device family. This includes an overview of Synopsys setup file preparation,

installation verification, and a design walk through for implementing these designs in the workstation environment.

Xilinx Printed Books

The following two books are available in printed versions only, and are not included with the Alliance Series software. Please contact your Xilinx customer service representative to order these books.

Simulation and Synthesis Design Guide

This manual provides a general overview of designing Field Programmable Gate Arrays (FPGAs) using Hardware Description Languages (HDLs). It includes design hints for both novice and experienced HDL users who are designing FPGAs for the first time.

Synopsys (XSI) HDL Synthesis and Simulation Design Guide

This manual provides a general overview of designing Field Programmable Gate Arrays (FPGAs) using Hardware Description Languages (HDLs). It includes design hints for both novice and experienced HDL users who are designing FPGAs for the first time. The examples in this manual are written specifically for Synopsys compilers.

The following section describes how to open and use the DynaText browser.

Starting and Using the DynaText Browser

Once you have installed the browser from and set variables, you are ready to use browser and read the online book collection. You must have DynaText version 3.1 installed on your machine in order to read all of the Xilinx online books.

The following subsections explain how to open documents and use the online documentation browser, DynaText.

Opening Online Books in DynaText

To open online documents, use the following instructions to start DynaText.

1. With your DynaText browser installed on your hard disk drive, select the following.

   PC users: **`Start`** → **`Programs`** → **`Xilinx`** → **`Documentation Viewer`**

   UNIX users: type **`dtext`** at your command prompt.

   If you are have the Xilinx Design Manager window open, you can start DynaText by accessing the following pull-down menu.

   `Help`→ **`Online Documentation`**

2. The DynaText Library window displays. Click any of the titles in the Collections window pane to display the contents of that collection.

   The "Xilinx Books" collection represents the online documentation installed on you disk drive.The "Xilinx Books (CD)" collection represents the books on CD-ROM.

Note: The "Answers on CD" collection title is not valid. To read the answers book, you must install it from the Implementation tools CD-ROM, then click the "Answers" collection title in DynaText.

The following figure shows the window view of DynaText from a PC.

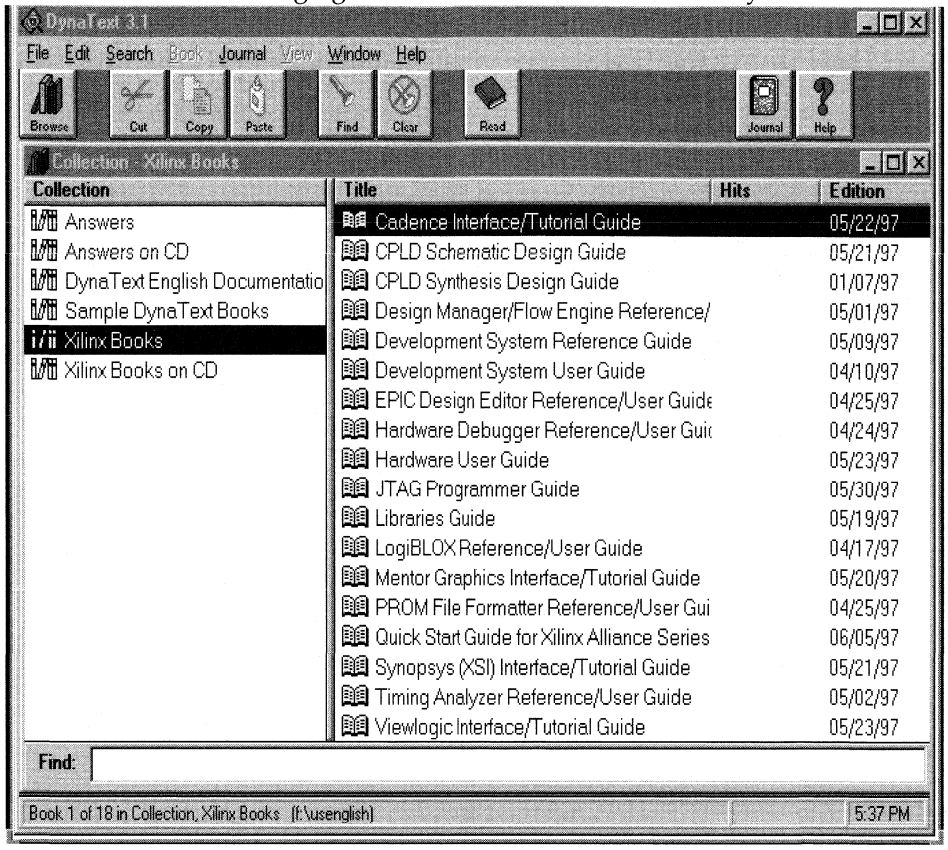

Figure 9-1 DynaText Library Window (PC Version)

The following figure shows the UNIX version of the DynaText library window.

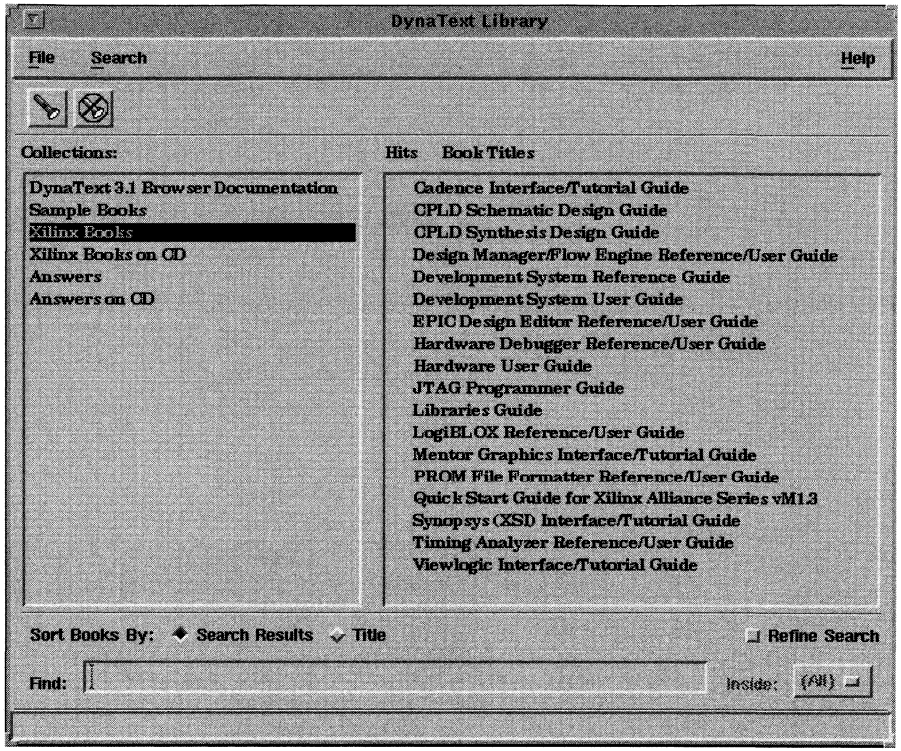

Figure 9-2 DynaText Library Window (Workstation Version)

3. A complete list of the online documents displays in the Books window pane. Double click on the book you wish to open. The Table of Contents for the document displays in the left portion ofthe window. The first page of the document displays in the right side of the window. See the following figure for an example.

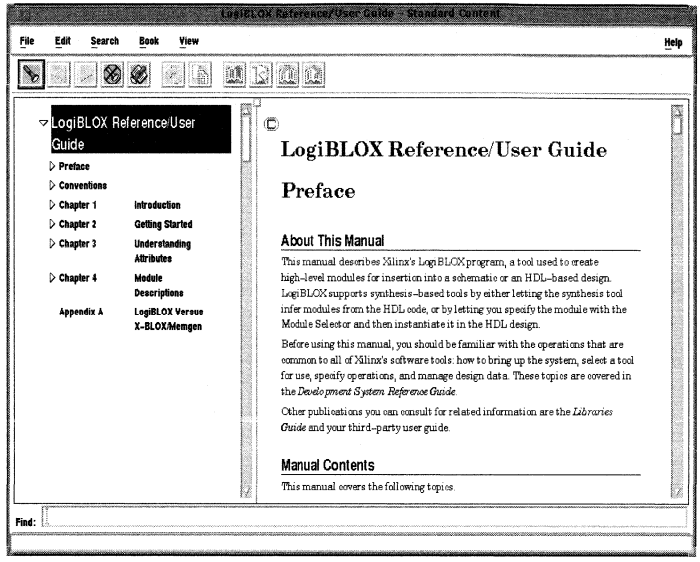

Figure 9-3 Typical DynaText Book Display

If you want to open a document from the CD-ROM, make sure that your CD-ROM is mounted (UNIX users) and inserted into the caddy. After you have started DynaText, select "Xilinx books (CD)" from the Collections window pane.

Note: For the most current list of known issues, see the Xilinx *Programmable Logic Data Book*, which is accessible through the Xilinx web site at http://www.xilinx.com.

You can also open online tutorial manuals for the browser by selecting "DynaText Documentation" from the Collection window.

Setting User Preferences in DynaText

You can change your user preferences in DynaText. To increase the font size of the screen text, change the toolbar appearance, and

modify your search preferences, click on the following pull-down menu.

File → Preferences

Setting Print Preferences in DynaText

You can also configure your printer setup and preferences in DynaText.

For workstation users, select the following.

File → Preferences→ Printers

If you need instructions on setting up your spooler preferences, refer to the *Alliance 1.5 Quick Start Guide*.

PC users should select **File → Print Setup**

Searching in DynaText

You can search across collections and books in DynaText. Access the search functions by using the **Search** pulldown menu, or clicking the icon that looks like a flashlight. This icon is located in the icon toolbar near the top of the DynaText library window.

DynaText Online Help

Access the online help within the browser using the pulldown menu as follows.

Help → Reader Guide

You can also access the DynaText tutorial books by opening the "DynaText Documentation" collection and selecting the User Guide.

Chapter 10

Known Issues

This chapter describes the most critical known issues in the Alliance Series 1.5 release at press time. For a complete, up-to-date listing of Known Issues, refer to the Xilinx Answers Book. You can access this book in two different ways.

- The most current version of the "Answers Book" is on the Xilinx web site, at http://www.xilinx.com/answers.html.
- You can also install the Answers Book from your Design Implementation Tools CD-ROM.

This chapter contains the following sections.

- "Design Entry"
- "Design Verification"
- "Translation"
- "Design Implementation"
- "Documentation and Online Help"
- "Virtex Issues"

Design Entry

The following known issues pertain to design entry.

NGO File Extension Changed to NGC

Platform(s): All

Architecture(s): All

Design step(s): Design Entry

Reference Number(s):

In the Xilinx M1.5 release, the filename extension ".ngo" has been changed to ".ngc". The change was implemented to address a problem encountered when a user directed LogiBLOX to produce an EDIF netlist for functional simulation of a LogiBLOX module.

When LogiBLOX is asked to make an NGD model for a module, it creates a file with an .ngo extension. The NGDBUILD program is supposed to read this NGO file as the implementation model for the LogiBLOX module.

However, in previous Alliance releases, the programs behaved as follows. When an EDIF netlist (for functional simulation) was present in the same directory, NGDBUILD would try to use this EDIF file as the source netlist to recreate the NGO file. Since the LogiBLOX-created EDIF netlist is intended only for simulation, and does not contain the required implementation information, NGDBUILD (EDIF2NGD) issues an error indicating this condition and rejecting the EDIF file.

To eliminate this problem, the M1.5 version of LogiBLOX will write the implementation netlist to a file with an ".ngc" extension, instead of ".ngo". When NGDBUILD v1.5 finds an ".ngc" file to define a module, it will use this file directly, and not look for any other associated "source" netlists. In all other respects, the ".ngc" file serves the same purpose as the ".ngo" file.

If you have an existing LogiBLOX design with ".ngo" files, these will continue to be read by M1.5 NGDBUILD, until such time as ".ngc" files are created for those modules. There is no problem in having both ".ngc" and ".ngo" files present for a design; if both exist for the same module, the ".ngc" will be used (it should be the newer one, in any case). To conserve disk space, you can delete the ".ngo" files once the ".ngc" files have been made.

Note: If you are having problems with the LogiBLOX-created EDIF simulation netlists being read by NGDBUILD (as described above), you may want to delete all the ".ngo" files and use LogiBLOX to generate new ".ngc" files.

Using Cadence Concept with Spartan/XL and Spartan devices.

Platforms: All

Architectures: Spartan, SpartanXL, Virtex

Design Step: Cadence Concept Schematic Entry (versions 97a and 9604)

Reference Numbers: 101436, 101609

For Cadence Concept users targeting Spartan or SpartanXL devices, the XC4000E or XC4000X families' switch must be used when invoking Concept2xil in order to create an EDIF netlist. Targeting Virtex devices with Concept is not supported with this release.

The command-line based EDIF netlister provided by Cadence, Concept2xil, does not allow the Spartan/XL device families.

Workaround:

Xilinx suggests you use the family XC4000E family for Spartan devices and the XC4000EX for SpartanXL devices. To do this you must first add the following lines to your project's cds.lib.

```
define xce4000e_syn <path_to_Xilinx_install>/
cadence/data/spartan_syn
```

```
define xce4000x_syn <path_to_Xilinx_install>/
cadence/data/spartanxl_syn
```

When invoking Concept2xil, use the following command-line syntax.

- Spartan

```
concept2xil -family xce4000e <design>
```

- SpartanXL

```
concept2xil -family xce4000x <design>
```

For more information on this issue, refer to the Xilinx web site at the following address.

```
http://www.xilinx.com/techdocs/3830.htm
```

The addition of Spartan, SpartanXL and other new Xilinx families will be made to the PE 13.x version of Cadence Concept and supported in the next software release. Virtex will not be officially supported until the next release of the Alliance software.

ConceptHDL in the PE 13.x will not be officially supported until the next Xilinx Alliance release.

Platforms: All

Architecture: All

Design Step: Cadence ConceptHDL (versions PE 13.x and later)

Reference Number: 104066

Due to the coinciding schedules of the Cadence PE 13.0 release with Alliance 1.5, there was not sufficient time to update the Cadence interface files, libraries and documentation as well as do sufficient testing to ensure quality assurance for the Alliance 1.5 release. Official support for the ConceptHDL PE 13.x will come with the next Xilinx release.

Design Verification

The following known issues pertain to design verification.

Too many Timespec paths can cause out-of-memory failure

Platform(s): All
Architecture(s): XC9500, XC9500XL
Design Step(s): Fit
Reference Number(s): 18405, Solution Record 2243

If your timespecs are too general, you may create too many timespec paths.

Workaround: If the software aborts due to an out-of-memory error, try making your timespecs more specific, naming only the I/O pads and flip-flops that have critical timing requirements in your design.

TRCE will not report on delays from the pad to IOB flops/latches or from IOB flops to pads

Platform: All

Architecture: All

Design Step: Timing Analysis/TRCE (Trace)

Reference Numbers: #8032 ,#14018

TRCE will not report on a path that starts on a pad and goes to an IOB synchronous element, such as an IFD or ILD. The same is true for an IOB synchronous element to pad path, except for the OFFSET OUT constraint.

In this case, TRCE will report the path, but the numbers it will give are more pessimistic than the "Guaranteed Input and Output Parameters" that Xilinx guarantees in the Data Book.

In both cases, this path has a fixed delay and the Data Book will give numbers in the "Guaranteed Input and Output Parameters". If you have an OFFSET OUT constraint, you may substitute the number given in the Data Book for the Global Clock to Output for the number given in the report.

FROM:THRU:TO constraint not higher priority than FROM:TO constraint

Platform: All

Architecture: All

Design Step: Timing Analysis/ TRCE

Reference Number: 104580

Xilinx documents that the FROM:THRU:TO constraint is of higher priority than the FROM:TO constraint. Currently, TRCE will regard a FROM:THRU:TO as being the same priority as a FROM:TO.

This is only of consequence if you have paths that are constrained by more than one timespec, and you depend upon the fact that a FROM:THRU:TO timespec is of higher priority than a FROM:TO constraint.

Workaround:

You can work around this by either attaching a PRIORITY keyword to the constraint to dictate the FROM:THRU:TO is of higher priority than the FROM:TO, or you can verify that the FROM:THRU:TO appears sooner in the PCF than the FROM:TO statement does.

Translation

The following known issues pertain to translation.

Viewlogic Navigator and LogiBLOX conflict due to module type

Platform(s): All
Architecture(s): All
Design Step(s): Translation
Reference Number(s): Solution Record 3079

When LogiBLOX modules are generated for Viewlogic schematics, they are given a module type of 'Composite'. This is done to allow functional simulations to be performed without having to compile the LogiBLOX elements through NGDBuild. The simulation can use descriptions that are created when the module is created.

However, by using this symbol type, bogus error messages will be reported by two tools. (The LogiBLOX module is called "LOGI" in the following errors.)

- When the Check program is run on the design (**`Tools->Check Project`** in Workview Office's Viewdraw, or **`check -p <design>`** from a command prompt), the following error will occur for each LogiBLOX component.

  ```
  Error: Could not load schematic sheet - LOGI.1
  ```

  However, the final summary will give the following, assuming all the errors are the bogus LogiBLOX errors.

  ```
  Total Errors - 0 and warnings - 0
  ```

- The Viewlogic Navigator gives the following error for each pin on each LogiBLOX module when opening the design.

  ```
  viewbase-E-413: Error - Schematic Pin Q_OUT on
  LOGI.1 is not on its symbol.
  ```

Workarounds:

These errors occur because 'composite' means that Viewlogic expects a lower level schematic for this symbol, but with LogiBLOX there is no schematic.

These errors can be safely ignored.

The EDIF written by EDIFNETO will refer to the LogiBLOX name and pins, and NGDBuild will properly merge the .NGO file produced when the LogiBLOX module was created. The Navigator will still be

able to probe the design even though it cannot see the non-existent LogiBLOX schematic.

These bogus error messages can be avoided by changing the LogiBLOX component type to Module. Push into the symbol and right-click on the background. Change the "Symbol Type" from "Composite" to **`Module`**.

Warning: This solution must only be used if you do not plan to do functional simulations without compiling the design through NGDBuild. If you do not compile the design, all LogiBLOX modules set to Block Type 'Module' will produce X's. This is why the default setting is 'Composite'.

If you are only performing timing simulations, or if you use the Xilinx Functional Simulation tool (see Solution 1985) for your functional simulations, then LogiBLOX symbols can be safely changed to 'Module'.

Design Implementation

The following known issues pertain to the design implementation process.

PROHIBIT property does not exclude pins from "Programmable Ground Pins" option

Platform(s): All
Architecture(s): XC9500, XC9500XL
Design Step(s): Bitstream
Reference Number: 104919

The PROHIBIT property can be used to reserve specific device pins so they remain unused by the CPLD fitter. However, if you enable the implementation option "Create Programmable Ground Pins on Unused I/O", all unused pins, including those listed in the PROHIBIT property, are connected to the device's ground network. A software patch will be provided that instead leaves all PROHIBIT pins undriven (floating) when the Programmable Ground Pins option is enabled. Please check the technical support area of the Xilinx website (www.xilinx.com) for the availability of a Version 1.5 CPLD fitter patch that you can download to fix this problem. This patch will allow you to connect PROHIBIT pins to live traces on your board in

anticipation of future CPLD design iterations, even if you use the Programmable Ground Pins option.

Workaround:

Until the CPLD fitter patch becomes available, you can work around this problem by creating dummy input and output pins in your design, instead of using the PROHIBIT property to reserve those pins. To create a dummy output pin that always remains in the high-Z state, implement a flip-flop with a constant zero as its clock and/or data input. The flip-flop will power-up and remain in the zero state. Then use the flop output to drive both the data and output-enable lines of one or more 3-state output buffers (OBUFE). To create dummy input pins, combine all associated input buffers (IBUF) into an AND-gate. Then use the AND-gate output to drive the asynchronous clear input of the same flip-flop used to create the dummy output pins.

CPLD Fitter does not support the TNM_NET property

Platform(s): All
Architecture(s): XC9500, XC9500XL
Design Step(s): NGDBuild
Reference Number: 105539

The TNM property (not TNM_NET) should be used to define timing group names, as needed, for all types of timing constraints in a CPLD design, including PERIOD timespecs. When translating a CPLD design containing PERIOD timespecs, please ignore the warning during the NGDBuild step (basts:158) which recommends using TNM_NET. Please continue to use the TNM property instead of TNM_NET for CPLD designs when using Version 1.5 software.

Command Window Hangs when using Powerview 6 with LogiBLOX

Platform(s):Solaris 2.6
Architecture(s): All
Design Step(s): Design Entry
Reference Number(s): 105291

If LogiBLOX is invoked from Viewdraw, the command window will go into an infinite loop. The viewblox script has trouble setting up the communication between Viewdraw and LogiBLOX.

Workarounds:

LogiBLOX can be invoked stand alone mode on the command line using the following steps:

1. Type **`lbgui -vendor viewlog -noalone`** from the unix command line.
2. Generate an edif netlist for your LogiBLOX component.
3. Type **`viewcell component.cfg -synthesize`** from the unix command line.

The INIT attribute can only be used in a schematic and/or NCF file for FPGA designs

Platform: all

Architecture: all

Design step: ngdbuild

Reference number: 18961

Workaround: If you want to use an INIT attribute on a FF primitive (such as FDCE) or a RAM primitive (such as RAM32X1S), the INIT attribute must be applied via a schematic attribute, or by using the INIT attribute in a NCF file.

Powerview 6: vanlibcreate gives linker error compiling LogiBLOX VHDL library

Platform(s): All
Architecture(s): All
Design Step(s): Compiling
Reference Number(s): Solution Record 3078

This problem will occur if you performed the following steps while creating an M1 software design with Powerview:

1. From Viewdraw, select **`Add->Logiblox`**. The LogiBLOX GUI "Setup" window opens.
2. In the "Options" tab in the "Setup" window, select only **`Behavioral VHDL netlist`**. Click **`OK`**.

3. In the LogiBLOX GUI main window, select any valid module configuration and start the generation of a VHDL model by clicking **OK**.

Viewdraw returns with a linker error during the running of "vanlib-create" on the LogiBLOX library.

On Solaris, the error reads as follows.

```
ld.so.1: vanlibcreate: fatal: libucb.so.1: can't
open file: errno=2 Killed
```

On HP-UX 10.2, the error reads as follows.

```
/bin/ld: DP relative code in file
<path_to_project>/logiblox.lib/mvlarith. pdr/
vantage.o - shared library must be position inde-
pendent.
```

Use **+z** or **+Z** to recompile.

Workarounds:

- When analyzing LogiBLOX VHDL models using Viewlogic on the Solaris platform, add **/usr/ucblib** to your LD_LIBRARY_PATH environment variable.
- Viewlogic on a HP system fails because the Powerview VHDL analyzer requires the "unbundled" version of the HP-UX C compiler. HP machines with the "unbundled" version usually have /bin/cc linked to /usr/ccs/bin/cc, which is the "bundled" version.

The INIT attribute can only be used in a schematic file, an NCF file, or both.

Platform: all

architecture:all

design step: ngdbuild

Reference Number: 18961

If you want to use an INIT attribute on a FF or RAM, the INIT attribute must be applied via a schematic attribute, or by using the INIT attribute in a NCF file.

Online Help for Floorplanner is not Implemented

Platform: All

Architecture: All

Design Step: Floorplanner

Reference Number: 104896

Online Help is not yet implemented for the Floorplanner. Please refer to the Floorplanner Reference/User Guide (using the Dynatext browser) for complete documentation on usage of the Floorplanner.

Unsupported FPGA devices for the Floorplanner

Platform: All

Architecture: Virtex, 5200, 3000

Design Step: Floorplanner

Reference Number: 105056

The Floorplanner does not support Virtex devices in the M1.5 release. Floorplanner may support Virtex in future releases. Xilinx XC5200 and XC3000 device families and derivative families will not be supported for any Floorplanner release.

Spaces in path names and file names may not work correctly with the Floorplanner

Platform: Win95/NT

Architecture: All

Design Step: Floorplanner

Reference Number: 105062

File management operations may not work correctly from within the Floorplanner if the path names and/or the file names include spaces.

Workaround: To avoid this problem, do not create path names or file names with spaces.

Floorplanner may print multiple "bad tag" messages when starting on a Solaris 5.6 system

Platform: Solaris 5.6

Architecture: All

Design Step: Floorplanner

Reference Number: 105979

The Floorplanner may print multiple "bad tag" messages in the window from which the tool was invoked as the Floorplanner starts. This behavior is unique to Solaris 5.6 (which is not a fully qualified OS at the time of the Alliance 1.5 release). No adverse results are expected as part of this behavior.

Documentation and Online Help

The following issues pertain to documentation and online help.

Selecting Help Topics command in the Help Menu in EPIC does not display the online help.

CR: 106851

Platform: PC

Tool: EPIC online help

Workaround: Online help can be accessed from the **`help`** button in any of the dialog boxes.

Incorrect Menu is displayed in EPIC when selecting Help Topics from the Help Menu.

CR: 106850

Platform: workstation

Tool: EPIC online help

On a workstation running Solaris, in EPIC, when you select Help Topics from the Help Menu for the first time, you may see the "Overview" help topic displayed first.

This is incorrect. The "EPIC Help" topics page should be displayed first. The EPIC Help topics page is the dialog box that has the Contents, Index, and Find tabs.

Workaround: click the **`Help Topics`** button to display the Help Topics page.

Virtex Issues

The following known issues pertain to the Virtex device family.

MPA will generate a FATAL ERROR if an OBUT output is dangling

Platforms: All supported

Reference Number:105271

Workaround: Attach the OBUF output to a PAD, or remove the OBUF from your design.

Mapper-Generated LOC Constraint Errors

Platforms: All supported

Reference Number:105307

Description: The Mapper generates and ERROR when a range LOC constraint is placed on a BlockRAM (RAMB4_) component type.

Workaround: Remove the range LOC constraint from the R component, or replace the range LOC constraint with more specific constraints.

TRCE will not trace SR to PAD paths

Platforms: All supported

Reference Number: 105889

Description: TRCE will not trace SR to PAD paths during default or advanced (-a) analysis.

Workaround: Not yet known

MAP doesn't support .nmc macros

Platforms: All supported

Reference Number: 106043

Description: MAP will retain configuration and logic from the macro, but loses the placement and routing information.

Workaround: Not yet known

MAP may generate a FATAL ERROR when trying to merge a MUXF5/MUXF6 with not-LUT logic

Platforms: All supported

Reference Number: 106238

Workaround: Replace the MUXF6 with an M2_1 (2-to-1-multiplexor).

Chapter 11

Software Service and Support

This chapter details how to contact Xilinx for Customer and Technical Support and how to find the most up-to-date information about Xilinx products. The following sections are in this chapter.

- "Customer Education"
- "Customer Service"
- "Technical Support"
- "Searching for Answers"

Customer Education

Xilinx provides extensive customer training courses for all of the software product lines.

For more information about customer education and software training for Xilinx products, please refer to the Xilinx web site at http://www.xilinx.com

You can also contact a Xilinx Training Administrator at the following toll-free number.

(1-877-XLX-CLASS)

International customers please contact your local sales representative or distributor for area-specific training programs.

Customer Service

For software licensing information, warranty status, shipping, and order management issues, contact Xilinx Customer Service using the information in the following table.

Country	Telephone	Facsimile
United States and Canada[1]	1-800-624-4782	408-559-0115
United Kingdom[2]	01932-333550	01932-828521
Belgium[2]	0800 73738	
France[2]	0800 918333	
Germany[2]	0130 816027	
Italy[2]	1677 90403	
Netherlands[2]	0800 0221079	
Other European Locations[2]	(44) 1932-333550	(44) 1932-828521
Japan	81 3 3297 9153	81 3 3297 9189

[1]Mon-Fri, 8:00 am - 5:00 pm Pacific time

[2]Monday–Friday, 9:00 a.m. to 5:30 p.m. United Kingdom time—English speaking only.

If you are an international customer, contact your local sales representative for customer service issues. Refer to the Xilinx web site at http://www.xilinx.com/company/sales/int_reps.htm for contact information.

A complete list of Xilinx worldwide sales offices is at http://www.xilinx.com/company/sales/offices.htm.

Technical Support

The following section details how to reach the Xilinx Application Service centers for your area. If you experience problems with the installation or operation of your software, Xilinx suggests that you first access the online documentation or search the Xilinx web site for information and answers.

You can also contact the Xilinx Technical Support hotline by phone, e-mail, or fax. When e-mailing or faxing inquiries, provide your complete name, company name, and phone number. The following table gives Worldwide contact information for Xilinx Application Service centers.

Location	Telephone	Electronic Mail	Facsimile (Fax)
North America	1-408-879-5199 1-800-255-7778	hotline@xilinx.com	1-408-879-4442
United Kingdom	44-1932-820821	ukhelp@xilinx.com	44-1932-828522
France	33-1-3463-0100	frhelp@xilinx.com	33-1-3463-0959
Germany	49-89-93088-130	dlhelp@xilinx.com	49-89-93088-188
Japan	local distributor	jhotline@xilinx.com	local distributor
Korea	local distributor	korea@xilinx.com	local distributor
Hong Kong	local distributor	hongkong@xilinx.com	local distributor
Taiwan	local distributor	taiwan@xilinx.com	local distributor
Corporate Switchboard	1-408-559-7778		

Searching for Answers

The most up-to-date information about Xilinx products is found in the following areas.

Device-Specific Information

Consult *The Programmable Logic Data Book* for device-specific information on Xilinx device characteristics, including readback, boundary scan, configuration, length count, and debugging. *The Programmable Logic Data Book* is available in hard copy and on the Xilinx web site (http://www.xilinx.com). See http://www.xilinx.com/partinfo/databook.htm for the current version of this book.

Design Issues and Techniques

For specific design issues or problems, use the Answers Search function on the Web (http://www.xilinx.com/support/searchtd.htm) to access the following.

- Answers Database: current listing of solution records for the Xilinx software tools
- Applications Notes: descriptions of device-specific design techniques and approaches
- Data Sheets: pages from *The Programmable Logic Data Book*
- XCELL Journal: quarterly journals for Xilinx programmable logic users
- Expert Journals: the latest news, design tips, and patch information on the Xilinx design environment

If you cannot access the Web, you can install and access the Answers book with the DynaText online browser in the same manner as the Xilinx book collection. The Answers book includes information in the Answers Database at the time of this release.

Appendix A

Registry Entries

This appendix describes entries that are made to the Registry during Alliance Series 1.5 installation for Windows operating systems.

The examples in this section assume that you installed the Alliance software into the default installation directory. The following sections are in this appendix.

- "Xilinx Environment Setup Registry Entries"
- "Alliance Typical Installation Variables"
- "Alliance Network Installation Variables"
- "Online Documentation Registry Entries"
- "Download Cable Driver Registry Entries"
- "Windu Registry Entries Settings"

Xilinx Environment Setup Registry Entries

The following sections describe the environment variables and paths that are added to the Registry for various installation options. Four keys to HKEY_LOCAL_MACHINE\SOFTWARE are added.

Xilinx Alliance\user

Xilinx Alliance\company

Xilinx Alliance\serial

Xilinx Alliance\setup

The setup is created with values based on what type of install you performed.

For Windows NT 4.0, the global environment variables, XILINX and XILINX_CD, and the path to the bin\nt directory are added to the following environment:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\SessionManager
\Environment.
```

For Windows 95, the global environment variables, XILINX and XILINX_CD, and the path to the bin\nt directory are added to the autoexec.bat file.

Alliance Typical Installation Variables

The following section describes the registry entries that are made or updated during software installation.

All of the updates are made to the System area of the environment, not to the User area. If you install the DynaText browser, 64 keys are also added. Refer to the "Online Documentation Registry Entries" section of this chapter for details.

Windows NT 4.0

If during installation you decided to have your environment variables and path updated, the XILINX variable is set to the destination directory that you specify. The XILINX_CD variable is set to the source directory from which the software is being installed.

The value %XILINX%\bin\nt is inserted to the existing path variable if it is not already there; for example,

%XILINX%\bin\nt +%PATH%

If there is no value,%XILINX% in\nt is added.

Windows 95

In the autoexec.bat file, the path%XILINX%\bin\nt is inserted before the existing path variable to the PATH statement (if there is an existing path statement). An example of this follows:

PATH=%XILINX%\bin\nt +%PATH%

If there is no PATH statement,%XILINX%\bin\nt is set up as the PATH:

PATH=%XILINX%\bin\nt

Alliance Network Installation Variables

The XILINX variable is set to the destination directory that you specify. The default is the source directory.

Windows NT 4.0

The value %XILINX_CD%\bin\nt is inserted before the existing path variable if it is not already there; for example:

%XILINX_CD%\bin\nt + %PATH%

If there is no path, %XILINX_CD%\bin\nt will be added.

Note: Make sure there is a CD drive in the path.

Windows 95

In the autoexec.bat file, the path %XILINX_CD%\bin\nt is prepended to the PATH, if there is an existing path statement:

PATH=%XILINX_CD%\bin\nt + %PATH%

If there is no PATH statement, %XILINX%\bin\nt is set up as the PATH:

PATH=%XILINX_CD%\bin\nt

Online Documentation Registry Entries

The following subsections describe the environment variables and paths that are added to the Registry for various installation options.

Typical Installation

Nine keys for the DynaText browser are added to HKEY_CLASSES_ROOT. The keys are also listed in the %XILINX%\bin\nt\ebtcom.reg file.These keys all have the same output value, as the following example shows.

```
Inproc Server32 = adidt3x.dll
```

The XILINX variable is set to the destination directory that you specify. The default is the current value of XILINX.

The XILINX_CD variable is set to the source directory from which the software is being installed.

The value %XILINX_CD%\bin\nt is inserted in the existing path variable if it is not already there; for example:

%XILINX_CD%\bin\nt + %PATH%

If there is no path, %XILINX_CD%\bin\nt will be added.

Note: Make sure there is a CD drive in the path.

Network Installation

The XILINX variable is set to the destination directory that you specify. The default is the source directory.

Windows NT 4.0

The value %XILINX_CD%\bin\nt is prepended to the existing path variable if it is not already there; for example:

%XILINX_CD%\bin\nt + %PATH%

If there is no path, %XILINX_CD%\bin\nt will be added.

Note: Make sure there is a CD drive in the path.

Windows 95

In the autoexec.bat file, the path %XILINX_CD%\bin\nt is prepended to the PATH, if there is an existing path statement:

PATH=%XILINX_CD%\bin\nt + %PATH%

If there is no PATH statement, %XILINX%\bin\nt is set up as the PATH:

PATH=%XILINX_CD%\bin\nt

Note: Make sure there is a CD drive in the path.

Download Cable Driver Registry Entries

This section describes the Registry entries and keys that are created when loading or using the driver for the Xilinx download cable (Parallel Cable III).

Windows 95 Keys

The following table shows the appropriate paths for setting the HKEY_LOCAL_MACHINE key.

Path	Value
System\CurrentControlSet\Services\VxD\WinDriver\Start	0
System\CurrentControlSet\Services\VxD\WinDriver\StaticVxD	*windrvr

Windows NT Keys

The following table shows the appropriate paths for setting the Windows NT keys.

Path	Value
System\System\CurrentControlSet\Services\WinDriver\Start	2
System\System\CurrentControlSet\Services\WinDriver\Type	1
System\System\CurrentControlSet\Services\WinDriver\ErrorControl	1
System\System\CurrentControlSet\Services\WinDriver\Group	Extended Base
System\System\CurrentControlSet\Services\WinDriver\ImagePath	\\System-Root\\System32\\dr
System\System\CurrentControlSet\Services\WinDriver\ DisplayName	WinDriver

Note: For NT users, Xilinx also installs the windrvr.sys as a Service.

Windu Registry Entries Settings

You may need to change your registry settings before operating the Design Manager. The following section details this process.

In order to use any UNIX workstation applications that have a Graphical User Interface you may need to update your registery. This can be done either automatically or manually.

To determine if your registry needs to be updated, execute the **`dsgnmgr`** program. If the Xilinx Design Manager window comes up, your registry is already up-to-date and does not require modification.

However, if the following text message appears, you must complete the registry update procedure in order to use any Xilinx program that requires a GUI.

```
This application has detected an old version of the
windu_registryd program on this computer system.  A
new version of the windu_registryd program is
supplied as part of this release of the Xilinx
software.  Xilinx software from previous releases
will run with this new version of the
windu_registryd program.  This application will now
update the windu_registryd program.
```

These registry modifications are backward compatible with previous versions of the Xilinx software, and will allow you to use previous versions if necessary.

- To automatically update your registry, execute the **dsgnmgr** program or type **xilinx** at a UNIX prompt. When you are asked "Do you want to continue (y | n) [y]?" press **y**.

When the process is complete you will see the following message.

```
The windu_registryd program has been successfully
updated. You may now run any Xilinx graphical user
application.
```

- To manually update your registry, execute the **update_registry.pl** script. The update_registry.pl script is located in the $XILINX/bin/platform directory where platform can be hp or sol. To start the script for Solaris, type **perl $XILINX/bin/sol/update_registry.pl**.

Appendix B

Troubleshooting

This appendix describes possible errors or problems you might have when installing the Alliance 1.5 software on various platforms.

All Systems

This section addresses errors that might happen on all systems.

Insufficient Space for Installation

The Setup program gives an indication if sufficient space is not available. There are several different causes for this warning, and though you may need to increase your disk space, read the following section for more information.

The warnings are not valid and you should continue with the install under the following conditions:

- When upgrading from one Xilinx release to another, the calculated required disk space for the install is replacement space for all or part of the disk space used by the currently installed version--not additional space. For example, if the install screen shows 140 Mb required for the newly selected install items and the disk shows only 100 Mb available disk space, and there are 130 MB of the current release that will be replaced by the new install, only 10 Mb is actually required for the install.

In this case, you can continue with the install.

- On a new or upgrade install to some Unix network drives, the screen may report no disk space available. In this instance, ignore the warning and continue with this install.
- You may also see negative required disk space numbers. This is

due to the install program's inability to detect and calculate available space on very large disk drives. In this instance, you can continue the install.

Data is Removed from the Installation Directory

Xilinx strongly recommends that you install this release of the software in a completely separate directory from any earlier Xilinx releases, unless you want to write over your previously software versions.

Online Books Do Not Appear When DynaText is Opened

In order for you to read the online documentation, you need to install the books onto your system. The *Answers Book for Alliance* can only be installed from the Implementation Tools CD-ROM for the 1.5 Release.

Font Size Too Small in DynaText Online Documentation

You can change the viewing options for your system and monitor, or you can increase the font/viewing size for the DynaText browser. Instructions for setting DynaText user preferences are in the "Starting and Using the DynaText Browser" section of the "Getting Started" chapter.

Unable to Print Full View of Tables or Figures in the Xilinx Libraries Guide

This situation can occur on Workstations. The workaround is to set your printer to print in "landscape" instead of "portrait" mode. Instructions are provided in the Alliance 1.5 Quick Start Guide.

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 B-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.

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 Windows 95 or Windows NT.
- If you do not have a Windows-compatible mouse, refer to the "List of Keyboard Commands" table for information on how to enter commands from the keyboard.

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. The following procedure applies to both Windows 95 and Windows NT 4.0.

1. To create a new program folder, click the right mouse button on **Start**. Select **Open**.
2. After the Start Menu window displays, select **File** → **New** → **Folder**. A new folder displays in the window.
3. Type a name for the new folder and press Return.
4. With the new folder selected, click **File** → **New** → **Shortcut**. The Create Shortcut window displays.
5. From the "Program Paths" table, enter the path in the Command line list box corresponding to the shortcut you want to create. The table assumes the software is installed in c:\xilinx.

Table B-2 Program Paths

Program Description	Path
Design Manager	C:\xilinx\dsgnmgr.exe
Timing Analyzer	C:\xilinx\timingan.exe
Hardware Debugger	C:\xilinx\hwdebugr.exe
PROM File Formatter	C:\xilinx\promfmtr.exe

6. Click Next. When the Select a Title for the Program window displays, enter a name for the shortcut and click Finish.
7. When the Select an Icon window displays, select one of the icons and click Finish.
8. In the Start Menu, drag the new shortcut icon into the new program folder.
9. Move the new folder containing the shortcut into the main Program folder.

Workstation Installations

This sections describes basic problems that you may encounter during workstation installation.

Errors When Installing Files on HP Systems

If some files are not being installed on HP systems, make sure that you are using Portable File System mount as described in the"Setting Up the Portable File System (HP Systems)" section of the "Considerations for Various Hardware Platforms" appendix.

Software Installation Is Taking a Long Time

Software installation may take a considerable amount of time especially if you are installing the CAE libraries CD. The Mentor and Cadence library installs can be quite lengthy.

Appendix C

HP Platform Setup

This chapter explains how to set up the HP platform portable file system for use with Xilinx Alliance software. There are also directions for how to reconfigure an HP system to meet Xilinx memory and swap requirements.

Setting Up the Portable File System

The Portable File System (PFS) allows you to access a variety of CD-ROM file systems including the Xilinx CD-ROMs, which are implemented in the RockRidge Interchange format. Use PFS if you are installing Xilinx software onto an HP/UX system. You must have root access to perform the following commands.

1. When running PFS on HP-UX, the network loopback must be configured. Enter the netstat -rn command to show the network routing tables and the lo0 entry for the loopback interface.

   netstat -rn

   Following is a sample display:

```
Destination     Gateway         Flags Refs    Use  Interface Pmtu PmtuTime
15.37.113.94    127.0.0.1       UH       1     12  lo0       4608
127.0.0.1       127.0.0.1       UH       0    106  lo0       4608
default         15.37.112.1     UG       0     32  lan0      1500
15.37.112.0     15.37.113.94    U        0    342  lan0      1500
```

   For 10.xx versions, make sure the following entry displays in the /etc/rc.config.d/netconf file:

   LOOPBACK_ADDRESS=127.0.0.1

2. Use the pfs_mountd to start the PFS daemons. These daemons must be running to allow network access on the server and client.

   /usr/sbin/pfs_mountd &

This command maintains local and remote mounts and spawns pfs_mountd.rpc.

3. Run the pfsd command.

   /usr/sbin/pfsd 4 &

   This command spawns pfsd.rpc. This daemon must be running on all systems designated as PFS servers.

4. Use the ps command to find out what is running on the system.

   ps -ef | grep pfs

   The following should be running:

```
root 1168 1167 2 17:30:30 ttyp1 0:00 pfs_mountd.rpc
root 1173 1169 2 17:30:48 ttyp1 0:00 pfsd.rpc
root 1172 1169 1 17:30:46 ttyp1 0:00 pfsd.rpc
root 1171 1169 0 17:30:45 ttyp1 0:00 pfsd.rpc
root 1169 1068 3 17:30:44 ttyp1 0:00 /usr/sbin/pfsd 4
root 1170 1169 0 17:30:44 ttyp1 0:00 pfsd.rpc
root 1167 1068 0 17:30:30 ttyp1 0:00 /usr/sbin/pfs_mountd
root 1175 1068 2 17:30:52 ttyp1 0:00 grep pfs
```

If all of the daemons are running, you can use the pfs_mount command to mount the Xilinx CD-ROM:

pfs_mount -t rrip -x unix /dev/dsk/*device_name* **/cdrom**

where *device_name* indicates the name of the CD-ROM device. Ask your System Administrator for the device name.

Setting Up Memory and Swap Space

Out of memory problems on the HP platform may be caused by kernel limitations. The default HP kernel is configured to allow only 64 MB maximum allocated swap space per process. This size might not be sufficient when working with some of the larger Xilinx devices.

The System Administrator may need to reconfigure the UNIX kernel to use more than the default values. Some recommended sizes for specific parameters are as follows:

maxdsiz = default 64MB changed to ---->640 MB
maxtsiz = default 64MB changed to ---->640 MB
maxssiz = 8 MB -----> 64 MB
maxupr = 75 ----->100

These parameters indicate the maximum amount of memory for any one process.

The parameter maxdsiz is the data partition (allocated data space).
The parameter maxtsiz is the text partition (actual program size).
The parameter maxssiz is the stack partition (recursive calls).
The parameter maxupr is the maximum number of user processes.

To reconfigure the kernel, perform the following steps:

1. /usr/sbin/sam
2. Choose kernel configuration.
3. Choose configurable Parameters
4. Double click and change to the indicated values for the following parameters.

   maxdsiz = default 0x4000000 changed to 0x28000000

   maxtsiz = default 0x4000000 changed to 0x28000000
   maxssiz = 0x00800000 changed to 0x4000000
   maxupr = 75 ----->100

   The "0x" in the previous parameters indicates that the values are hexadecimal. The decimal equivalents for these parameters are as follows:

   maxdsiz = default 64 MB changed to ---->640 MB
   maxtsiz = default 64 MB changed to ---->640 MB
   maxssiz = 8 MN -----> 64 MB
   maxupr = 75 ----->100

   maxdsiz is maximum data size
   maxtsiz is maximum text size
   maxssiz is the swap space
   maxupr is the maximum number of user processes

5. Choose create a new kernel. Use default from the menu and a new kernel will be created to reflect the changes and then system will be rebooted.

As an example, assume you want to assign 64 MB as the maximum amount of memory that one process can utilize. Take 64 bytes x 1024 x 1024 = 67,108,864 bytes. Converting the result to hexadecimal gives a result of 4,000,000. This is the default value of the "maxdsiz." Step 4 increases the value from 64 MB to 640 MB and therefore, the value is

640x1024x1024=671088640. This converts to hex value 28,000,000. Therefore, maximum user process was increased from 75 to 100 processes.

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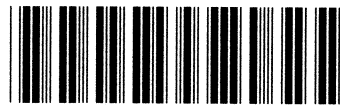

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