



Release Document

XABEL-CPLD

November 1995

Read This Before Installation

Versions and Compatibility

This section provides Xilinx fitter compatibility information that may help simplify the installation of XABEL-CPLD.

Xilinx DS550 Fitter Compatibility

The Xilinx fitter (version 6.0) used in this release of XABEL-CPLD is the same fitter that is used in the Xilinx DS550 V6.0 software. If you have DS550 V6.0 installed on your system, you can simplify the installation of XABEL-CPLD by installing only XABEL-CPLD *without* the fitter. You will be prompted for this information during the installation process.

Note: You may find system maintenance simpler by having only one version of the fitter in your system for both XABEL-CPLD and DS550 V6.0. Then, as fitter enhancements are released, you will only need to update one fitter instead of two.

Contents

Chapter 1 Introduction

Software	1-1
Documentation	1-1
Maintenance and Support	1-1

Chapter 2 System Requirements

Hardware.....	2-1
Operating System	2-1
Memory Manager Support	2-1
XABEL-CPLD Installation for Windows.....	2-2
Installation Procedure	2-2
User Notes	2-2

Chapter 3 Features in This Release

ABEL-HDL.....	3-1
Hierarchical Design Entry.....	3-1
JEDEC File Conversion	3-1
XACT-Performance.....	3-1
Functional Simulation	3-1
Timing Analyzer	3-2
Automatic Device Selection	3-2
Design Reports	3-2
Simulation Support.....	3-2
Guide File for Pin Freezing	3-2

Chapter 4 Device and Package Support

Device and Package Support.....	4-1
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Chapter 5 Xilinx Customer Support Information

Registration, Authorization, and Customer Service	5-1
Technical Support	5-1
Training	5-2

Chapter 1

Introduction

Welcome to the XABEL-CPLD from Xilinx!

XABEL-CPLD is contained on a single CD-ROM that includes all software and documentation. No printed documentation is required.

Software

XABEL-CPLD includes:

- DATA I/O ABEL design entry and simulation
- Xilinx XC7300 fitter, version 6.0

Documentation

There is no printed documentation needed for this product; all user and reference information is contained in the on-line help system.

Maintenance and Support

This product comes with free technical and product information telephone support (toll-free in the U.S. and Canada). You can also fax and e-mail your questions. See the “Xilinx Customer Support Information” chapter of this release note for offices and phone numbers.

System Requirements

This chapter describes the hardware and operating system requirements for installing and running XABEL-CPLD. The installation procedure is also provided here.

Hardware

To run XABEL-CPLD, you need the following hardware:

- IBM-compatible PC - 486 or Pentium.
- VGA (or SVGA) graphics card and monitor.
- 16 MB of RAM, minimum.
- At least 30 MB of disk space on the hard disk drive.
- ISO9660 CD-ROM drive.
- Windows-compatible mouse.
- Two serial RS-232 ports and one parallel port (for a security key).

Operating System

To run XABEL-CPLD you need the following software:

- MS-DOS 5.0 or later.
- Windows 3.1.

Memory Manager Support

XABEL-CPLD runs under MS-DOS 5.0 or later. With MS-DOS 5.0, do not start the HIMEM.SYS expanded memory manager in your CONFIG.SYS file.

XABEL-CPLD Installation for Windows

The following information describes how to install the XABEL-CPLD software and how to enable your security key.

Installation Procedure

1. Connect the XABEL-CPLD security device to your computer's parallel port.
2. Insert the Xilinx CD-ROM disk into your computer's CD-ROM drive.
3. From the Windows Program Manager, select File → Run.
4. Type *drive*:\SETUP, where *drive* is the drive letter designation of your computer's CD-ROM drive (for example, F:\SETUP).
5. Follow the on-screen installation instructions.
6. After the install is completed, double-click on the XABEL-CPLD icon in the XABEL-CPLD program group.
7. From the XABEL-CPLD Project Navigator, select Help → Tutorial and run the on-line tutorial to learn how to use XABEL-CPLD.
8. Call the Xilinx Registration Service to get the software key code to enable your security key. These phone numbers are shown in Chapter 5 of this document.
9. From the XABEL-CPLD Project Navigator, select Tools → Enable Xilinx Key. Enter the security key enable code as requested.

User Notes

Important information about XABEL-CPLD is placed in your installation directory during installation. These files are in Microsoft Write (.WRI) format and can be found in the readme subdirectory of your installation directory.

The XABEL-CPLD readme file is installed as an icon in the XABEL-CPLD program group. This readme file contains last-minute release notes as well as other useful information you should know such as hardware and operating system requirements.

Chapter 3

Features in This Release

This chapter discusses the features of XABEL-CPLD and describes the most recent Xilinx fitter improvements.

ABEL-HDL

The industry standard ABEL-HDL behavioral design language supports state machines, high-level logic descriptions, truth tables, and equation entry.

Hierarchical Design Entry

You can easily convert multiple PAL designs into a single Xilinx device.

JEDEC File Conversion

You can convert JEDEC files generated by and PAL development tool for over 100 common PAL types.

XACT-Performance

Timing specifications for paths and groups of paths in your design can now be specified using the same attributes used on FPGA designs.

To specify timing for your design, use a .cst (constraint) file.

Functional Simulation

A fully integrated functional simulator with waveform viewer provides functional verification before your design is implemented.

Timing Analyzer

The Timing Analyzer allows you to analyze the timing of your implemented design. You can choose from the following timing reports:

- Performance Summary — Summarizes the overall design performance.
- Detailed Path Analysis Report — Lists worst-case path delay information for all paths in the design.

Automatic Device Selection

The Xilinx fitter can automatically choose the smallest possible target device when fitting your design.

Design Reports

XABEL-CPLD produces several reports that show you the status of your design. The reports are:

- Resource Report — Lists the device resources used by the design and the resources remaining.
- Pin Out Report — Shows how the external nets in your design were mapped to the device pins.
- Fitting Report (formerly Partitioner Report) — Shows the allocation of Function Block resources.
- Timing Report — Shows the calculated worst-case timing for the logic paths in your design.

Simulation Support

A backannotated XNF file is generated to support third-party timing simulators.

Guide File for Pin Freezing

To preserve the pinout of your design, you can use a guide file (design_name.gyd), which is created when you run the fitter.

We strongly recommend using the guide file instead of back-annotating the pinout into the design.

Chapter 4

Device and Package Support

The following is a master table of Xilinx devices for this release. For more information on architectural families and specific device parameters, see *The Programmable Logic Data Book*.

Device and Package Support

Device	Packages	Speed Grades
XC7318	PC44, PQ44	-5, -7
XC7336	PC44, PQ44	-5, -7, -10, -12, -15
XC7354	PC44, PC68	-7, -10, -12, -15
XC7372	PC68, PC84, PQ100	-7, -10, -12, -15
XC7336Q	PC44, PQ44, VQ44	-10, -12, -15
XC73108	BG225, PC84, PG144, PQ100, PQ160	-7, -10, -12, -15, -20
XC73144	BG225, PQ160	-7, -10, -12, -15
XC7236A*	PC44	-16, -20, -25

* This device is not listed in the On-line Help Device Selection Guide.

Xilinx Customer Support Information

For registration, authorization codes, update information, warranty status, shipping, product issues, and technical support call Monday through Friday, 8 a.m. to 5 p.m. Pacific time.

Registration, Authorization, and Customer Service

- United States and Canada.....1-800-624-4782
- Europe.....44-1-932-349401
- Japan.....81-33-297-9164
- Southeast Asia/All Other Countries.....852-2410-2739
- Facsimile Transmission.....1-408-559-0115
- International customers may also contact their local sales representative or distributor.

Technical Support

- Technical Support Hotline
 - United States and Canada.....1-800-255-7778
 - International.....1-408-879-5199
- Technical Support FAX (24 hours/7 days)1-408-879-4442
- Technical Support BBS (24 hours/7 days)1-408-559-9327
- Internet E-mail Address (24 hours/7 days).....hotline@xilinx.com

Training

- Xilinx Training Administrator1-408-879-5090
- International customers contact your local sales representative or distributor.



The Programmable Logic CompanySM



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