



# **ispLEVER 7.1 Installation Notice**

UNIX

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## Type Conventions Used in This Document

Convention	Meaning or Use
<b>Bold</b>	Items in the user interface that you select or click. Text that you type into the user interface.
<i>&lt;Italic&gt;</i>	Variables in commands, code syntax, and path names.
<b>Ctrl+L</b>	Press the two keys at the same time.
<i>Courier</i>	Code examples. Messages, reports, and prompts from the software.
...	Omitted material in a line of code.
.	Omitted lines in code and report examples.
[ ]	Optional items in syntax descriptions. In bus specifications, the brackets are required.
( )	Grouped items in syntax descriptions.
{ }	Repeatable items in syntax descriptions.
	A choice between items in syntax descriptions.

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# Installing ispLEVER Tools

This document provides installation instructions for the ispLEVER<sup>®</sup> UNIX software.

During installation, you will be prompted to select the installation path for the ispLEVER software and global constraints for JEDEC file options.

The ispLEVER software supports LatticeEC<sup>™</sup>, LatticeECP<sup>™</sup>, LatticeECP2<sup>™</sup>, LatticeECP2S, LatticeECP2M<sup>™</sup>, LatticeECP2MS, LatticeXP<sup>™</sup>, LatticeXP2<sup>™</sup>, LatticeSC<sup>™</sup>, LatticeSCM<sup>™</sup>, and MachXO<sup>™</sup> designs.

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## System Requirements

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The following are the basic system requirements for the ispLEVER UNIX software:

- ◆ Sun Solaris 2.10 operating system or 2.8 operating system with the following patches installed:
  - ◆ Patch 109147-23 or higher
  - ◆ Math library (libm) patch 111721-04
- ◆ Approximately 4.5 GB free disk space

- ◆ X Window System Version X11R6 (or compatible) CDE
- ◆ Color monitor
- ◆ CD-ROM drive (2X or above) or DVD-ROM drive
- ◆ HTML-compatible Web browser

Table 1 lists the minimum memory requirements and recommended memory for the UNIX operating systems on 32-bit platforms for all the Lattice Semiconductor FPGA device families.

**Table 1: Recommended Memory for UNIX 32-Bit Platforms**

Device	Size	Minimum	Recommended
MachXO	All	256 MB	512 MB
LatticeECP, LatticeXP, LatticeXP2	Up to 20K LUT	512 MB	768 MB
	Up to 50K LUT	768 MB	1 GB
LatticeECP2/S	Up to 20K LUT	768 MB	1 GB
	Up to 50K LUT	1 GB	1.5 GB
	Up to 70K LUT	1 GB	2.0 GB
LatticeECP2M/S	Up to 20K LUT	512 MB	768 MB
	Up to 50K LUT	768 MB	1 GB
	Up to 70K LUT	1 GB	1.5 GB
	Up to 100K LUT	1 GB	2.0 GB
LatticeSC/M	Up to 40K LUT	768 MB	1 GB
	Up to 115K LUT	1 GB	2.5 GB

## Contacting Lattice Semiconductor

You can contact Lattice Semiconductor by any of the following means:

- ◆ Lattice Semiconductor Corporation  
5555 Northeast Moore Court  
Hillsboro, Oregon 97124-6421 U.S.A.
- ◆ Internet: [www.latticesemi.com](http://www.latticesemi.com)
- ◆ Literature Hotline: 1-888-ISP-PLDS (477-7537)

- ◆ Applications Support  
Domestic: 1-800-LATTICE (528-8423)  
International: (503) 268-8001  
Fax: (503) 268-8556

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## Installation Disk Contents

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The ispLEVER 7.1 software gives you the option of installing from five CDs or from a single DVD.

### CD-ROM Contents

The following describes the contents of the five CD-ROMs: four for installing ispLEVER, and one for installing Synplicity<sup>®</sup> Synplify<sup>®</sup> and Synplify Pro<sup>®</sup> for Lattice.

- ◆ ispLEVER CD-ROM 1 contains the following directories and files:
  - ◆ The acroread directory contains the acro\_sol.taz file, which installs the Adobe Acrobat Reader software. Refer to “Installing Adobe Acrobat Reader” on page 13 for more information.
  - ◆ The isptools directory contains the isplever.taz file, which contains the compressed ispLEVER software.
  - ◆ The Installation Notice contains installation and licensing information.
  - ◆ The install.csh file contains the installation script for installing the software that is on the CD.
- ◆ ispLEVER CD-ROMs 2, 3, and 4 contain the compressed ispLEVER software.
- ◆ Synplify Pro for Lattice CD-ROM contains the synp\_install.sh, LatticeLicense.txt, and synplify.taz files for installing Synplicity Synplify and Synplify Pro for Lattice. See “Installing Synplify/Synplify Pro for Lattice” on page 10 for more information.

### DVD-ROM Contents

The single DVD-ROM contains the same directories and files that are included in the four CD-ROMs.

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## ispLEVER Installed Directory Structure

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Table 2 shows the directories and files of the ispLEVER software directory structure after installation:

**Table 2: The ispLEVER Software Directory Structure**

File or Directory	Description
ispLEVER_Install_Unix.pdf	This file contains installation instructions.
isptools/	This directory is the main directory.
isptools/cae_library/	This directory contains synthesis header libraries for Synplicity in both Verilog and VHDL formats. It also contains the libraries for interface kits (ispLSI <sup>®</sup> design and simulation libraries).
isptools/examples	This directory contains Lattice design examples.
isptools/ispcpId/	This directory contains files for the ispLEVER software.
isptools/ispfpga/	This directory contains files for the ispLEVER software.
isptools/ispjtools/	This directory contains files used by ispUPDATE.
isptools/ispvmsystem/	This directory contains Lattice Semiconductor ispVM device programming software.
isptools/license/	This directory contains the license agreement.

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# Installing the ispLEVER 7.1 Software

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An installation script named `install.csh` is provided on the CDs or DVD to simplify the installation process. You can perform full installation of the ispLEVER software, or you can perform customized installation to select parts of the software to be installed. The following sections guide you through these two installation methods step by step.

## Full Installation

The ispLEVER full installation installs all Lattice Semiconductor FPGA devices on your system. It also installs the ispVM System, sets the software to automatically generate serial vector format (SVF), and uses Checksum as the USERCODE default.

*To perform full installation of the ispLEVER software:*

1. Insert the ispLEVER software CD-ROM 1 or DVD into the disk drive.
2. Mount the installation disk. If you are installing from a network, mount the drive by making a directory mount point and using the proper mount argument.
3. Specify a path location for installing the ispLEVER software, create a directory, and change to that directory, as in this example:

```
mkdir <path>/<install_path>  
cd <path>/<install_path>
```

4. Make sure you have correctly configured the “xhost” setting on your system. Active Support requires X functions to display a dialog box toward the end of the installation.

### Note

If the ispLEVER installation script is run on a system without an X system active, or if “xhost” is not correctly configured, the installation script will still install the ispLEVER software correctly. However, it will generate an error while trying to complete the Active Support dialog box.

5. Execute the `install.csh` script located on the disk with the path to the installation disk as its argument:

```
<CD_Mount_Path>/cdrom0/install.csh <CD_Mount_Path>/cdrom0
```

```
<DVD_Mount_Path>/cdrom0/cd_1/install.csh <DVD_Mount_Path>/  
cdrom0/cd_1
```

---

**Note**

- ◆ The install.csh file is a command line based script.
  - ◆ You can execute install.csh without arguments to get its help message.
- 

6. After running the install.csh script, you will be prompted with:

```
Do you want to install all of ispLEVER Design Tools? ([Y]/N)
```

---

**Note**

“[Y]” indicates that **Y** is the default selection when you press **ENTER**.

---

7. Enter **Y** to install all of the ispLEVER Design Tools.

If you want to perform customized installation, enter **N** and jump to “Customized Installation” on page 7.

8. When prompted by the following prompt, enter **Y** or **N** as appropriate:

```
Are you installing from the DVD drive? ([Y]/N)
```

9. When prompted by the following prompt, enter **Y** or **N** as appropriate:

```
Are you installing from the CDROM drive? ([Y]/N)
```

At this point, the installer begins copying the installation files to your directory. If you are installing from the CD-ROM, you will be prompted to insert CD-ROM 2, CD-ROM 3, and CD-ROM 4. If you are installing from the DVD, you will not be prompted.

Toward the end of the installation, the Active Support dialog box appears, requesting your permission to allow Lattice Semiconductor to collect limited design information for product development purposes. Click either **I Accept** or **I Decline**. In either case, installation will complete normally.

---

**Note**

Active Support requires X functions to display this dialog box. If the installation script is run on a system without an X system active, or if “xhost” is not correctly configured, an error will be generated. However, the installation script will still install the ispLEVER software correctly.

---

## Customized Installation

The ispLEVER customized installation enables you to select the Lattice FPGA devices you want to install on your system. You can also install ispVM System, set the software to automatically generate serial vector format (SVF), and use Checksum as the USERCODE default.

*To perform customized installation of the ispLEVER software:*

1. Follow step 1 through step 4 of the “Full Installation” on page 5.

After running the install.csh script, you will be prompted with:

```
Do you want to install all of ispLEVER Design Tools? ([Y]/N)
```

2. Enter **N** to select the parts of the software you want to install.

You will be prompted with:

```
Do you want to install ispLEVER Design Tools (Part1)?([Y]/N)
```

3. Enter **Y** to proceed.

You will be prompted with:

```
ispLEVER Design Tools (Part 2 & 3) will be installed  
automatically after installing Part 1.  
Are you installing Part 2 & 3 from the DVD drive? ([Y]/N)
```

4. Enter **Y** or **N** as appropriate.

You will be prompted with:

```
Are you installing Part 2 & 3 from the CDROM drive? ([Y]/N)
```

5. Enter **Y** or **N** as appropriate.

Now you will be prompted to choose the Lattice Semiconductor FPGA device options:

```
Do you want to install the FPGA product family data files?  
([Y]/N) .
```

## Lattice FPGA Device Options

*To install Lattice FPGA devices:*

1. To the following prompt from the previous step, enter **Y** to install Lattice FPGA devices:

```
Do you want to install the FPGA product family data files?  
([Y]/N)
```

If you do not want to install Lattice FPGA device, enter **N** to jump to the next selection.

You will be prompted with:

```
Which FPGA families do you want to install?
Please choose one of the following numbers:
For example: enter 1 if you want to install LatticeECP2/
LatticeECP2S only.
```

```
1 --- LatticeECP2/LatticeECP2S
2 --- LatticeECP2M/LatticeECP2MS
3 --- LatticeSC/LatticeSCM
4 --- LatticeXP2
5 --- MachXO
6 --- LatticeXP
7 --- LatticeEC/LatticeECP
8 --- All of the above
0 --- No FPGA Families
```

```
Please enter number(s) separated with a space:
For example, enter: 1 4 (for LatticeECP2/LatticeECP2S and
LatticeXP2)
```

2. Choose the FPGA devices that you want to install and enter the numbers accordingly.

You will receive a confirmation message, showing your choices:

```
You entered the following choice(s):
4 --- LatticeXP2
```

You will be prompted again to install from DVD or CD-ROM.

3. Enter **Y** or **N** as appropriate.

## Setting ispVM Installation and SVF File Generation

The ispLEVER installation script gives you the option, with a “Y” or “N” prompt, of forcing the installation of ispVM System and setting the default for SVF generation.

*To set ispVM installation and SVF file generation:*

- ◆ To the following prompt, enter **Y** or **N** as appropriate:

```
Do you want to set the software to automatically generate
Serial Vector Format (.svf) files? ([Y]/N)
```

Now you will be prompted to set Checksum as the USERCODE default:

```
Do you want to use Checksum as USERCODE default? ([Y]/N)
```

## Setting CHECKSUM as USERCODE Default

The ispLEVER installation script gives you the option, with a “Y” or “N” prompt, of setting the default for USERCODE to CHECKSUM. With this option, the ispLEVER software inserts the JEDEC file's CHECKSUM value into the USERCODE field. If the ispLEVER software is generating an ISC data file, it inserts the CRC value into the USERCODE field.

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### Note

For LatticeXP, LatticeXP2, and MachXO devices, CHECKSUM is the default for USERCODE.

---

*To set CHECKSUM as the USERCODE default:*

- ◆ To the following prompt from the previous step, enter **Y** or **N** as appropriate:

```
Do you want to use Checksum as USERCODE default? ([Y]/N)
```

At this point, the installer begins copying the installation files to your directory. If you are installing from the CD-ROM, you will be prompted to insert CD-ROM 2, CD-ROM 3, and CD-ROM 4. If you are installing from the DVD, you will not be prompted.

Toward the end of the installation, the Active Support dialog box appears, requesting your permission to allow Lattice Semiconductor to collect limited design information for product development purposes. Click either **I Accept** or **I Decline**. In either case, installation will complete normally.

---

### Note

Active Support requires X functions to display this dialog box. If the installation script is run on a system without an X system active, or if “xhost” is not correctly configured, an error will be generated. However, the installation script will still install the ispLEVER software correctly.

---

## Installing Synplify/Synplify Pro for Lattice

The Synplify and Synplify Pro for Lattice software are available for a separate installation on the Synplify Pro for Lattice CD or ispLEVER installation DVD. An installation script named `synp_install.sh` is provided to simplify the installation process.

*To install Synplify/Synplify Pro for Lattice:*

1. Insert the Synplify Pro for Lattice CD-ROM or ispLEVER installation DVD into the disk drive.
2. Mount the installation disk. If you are installing from a network, mount the drive by making a directory mount point and using the proper mount argument.
3. Specify a path location for installing the Synplify/Synplify Pro software, create a directory, and change to that directory, as in this example:

```
mkdir <path>/<install_path>  
cd <path>/<install_path>
```

4. Execute the `synp_install.sh` script located on the disk with the path to the installation disk as its argument:

```
<CD/DVD_Mount_Path>/synp_install.sh <CD/DVD_Mount_Path>
```

5. After running the `synp_install.sh` script, you will be prompted to agree to the license agreement, choose the platform, specify the installation path, and confirm the disk space. Follow the on-screen instructions and type in your answers to the prompts.

After the installation completes, you can start using Synplify/Synplify Pro as a standalone synthesis tool. See “Running Synplify/Synplify Pro for Lattice” on page 18 for more information.

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## Installing the ispLEVER Software from a Server

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The following sections explain how to set up the ispLEVER installation files on a server and install the software from the server instead of from the CD-ROM.

### Setting Up the Files

*To copy the four CD-ROMs to a server:*

1. Create the following directories: `cd_1`, `cd_2`, `cd_3`, `cd_4`, `synplify`.

2. Copy the contents from each of the five CD-ROMs to its appropriate directory.

*To copy the DVD to a server:*

1. Create a directory for the DVD contents, using lower-case letters.
2. Copy the contents from the DVD to the dvd directory that you created. The DVD contains the same files and directories as the three CD-ROMs.

## Configuring the X Environment

Before installing ispLEVER from a remote UNIX server, configure the X environment to allow the remote computer host to access your X system. Active Support requires X functions to display a dialog box toward the end of the installation.

*To configure the X environment:*

- ◆ Execute `xhost +hostname`.

### Note

If the ispLEVER installation script is run on a system without an X system active, or if “xhost” is not correctly configured, the installation script will still install the ispLEVER software correctly. However, it will generate an error while trying to complete the Active Support dialog box.

## Installing ispLEVER from a Server

*To install the ispLEVER software from a server to your local computer:*

1. Create a directory for the installation on your local computer.
2. Change to the directory that you created.
3. Copy and paste the path for the installation script, and then paste it again without the installation script file name, for example:

```
<path>/cd_1/install.csh <path>/cd_1
```

4. Press **Enter**.

You will be prompted with:

```
Do you want to install all of ispLEVER Design Tools? ([Y]/N)
```

- ◆ If you enter **Y** to perform full installation, refer to “Full Installation” on page 5 for further instructions.

- ◆ If you enter **N** to perform customized installation, refer to “Customized Installation” on page 7 for further instructions.

## Installing Synplify/Synplify Pro for Lattice from a Server

To install Synplify/Synplify Pro for Lattice from a server to your local computer:

1. Create a directory for the installation on your local computer.
2. Change to the directory that you created.
3. Copy and paste the path for the Synplify/Synplify Pro installation script, and then paste it again without the installation script file name, for example:

```
/<path>/synplify/synp_install.sh /<path>/synplify
```

4. Press **Enter**.

You will be prompted to agree to the license agreement, choose the platform, specify the installation path, and confirm the disk space. Follow the on-screen instructions and type in your answers to the prompts.

## Installing Service Packs

Lattice may introduce Service Pack updates to the ispLEVER 7.1 software. To see if a Service Pack is available, run the ispUPDATE tool, or visit the Lattice web site at:

[www.latticesemi.com/islever](http://www.latticesemi.com/islever)

If you choose to download a UNIX service pack, follow these instructions to install it.

Download the UNIX service pack to your local temporary directory, `<temp_isptools>`, and use the following commands to execute the self-extracting `.sh` file for decompressing:

```
cd <install_path>/isptools/  
sh <temp_isptools>/ru<service_pack_number>.sh
```

You can obtain the `<service_pack_number>` from ispUPDATE on the Web.

---

## Installing Adobe Acrobat Reader

---

Adobe Acrobat Reader is required for viewing manuals and data sheets in PDF format. If you do not already have Adobe Acrobat Reader installed on your system, you can use the Acrobat Reader installation file, `acro_sol.taz`, which is included in the `acread` directory of CD-ROM 1. This file installs Acrobat Reader version 5.0.9. If you have an older version of Acrobat Reader, it is recommended that you install version 5.0.9 to ensure the proper viewing and printing of the documents. The `acro_sol.taz` file contains a `readme` text file with complete installation instructions.

After you install Acrobat Reader, each user must set the path to the software's `bin` directory, as follows:

```
set path = (<path_to_Acrobat_Reader_bin_directory> $path)
```

To apply the change, open a new window or type the following:

```
source .cshrc
```

---

## Licensing for the ispLEVER Software

---

You must set the license environment variable before running the ispLEVER software.

### Note

The ispLEVER 7.1 software uses FLEXlm 11.4 license administration software. FLEXlm 11.4 supports 32-bit Sun Solaris OS version 7 through 10 and requires Sun Solaris patch 109147-23 or higher. Users of the ispLEVER 3.1 or older software must bring down the previous license daemon and start the new license daemon.

The default location of the license file is `<install_path>/isptools/license/license.dat`. If this location is changed, you must set the `LM_LICENSE_FILE` environment variable to include the new path name.

### Note

In order to change the `LM_LICENSE_FILE` variable, you must edit the `.cshrc` file. Do not change the `license.dat` location after installation.

## Obtaining a License

To register and license your ispLEVER software:

- ◆ Obtain the host ID of your license server with the following command:

```
<install_path>/isptools/ispcpld/bin/lmutil lmhostid
```

- ◆ Go to the Licensing section of the Lattice Semiconductor Web site ([www.latticesemi.com/license](http://www.latticesemi.com/license)) and follow the on-screen instructions.

### Note

---

Lattice Semiconductor supports licensing for a single server or three redundant servers. If you are using three redundant servers, enter all three server host IDs on the License File/Registration Form.

---

Lattice Semiconductor will send your ispLEVER license file (license.dat) to you by e-mail within one working day. After you receive the license file from Lattice Semiconductor, copy the license.dat file to the ispLEVER license directory as follows:

```
<install_path>/isptools/license/license.dat
```

## Editing the License File

You must edit a floating license file to specify the server name and the path to the Lattice daemon.

The following example shows a floating license file:

```
SERVER nodename 1234abcd 1710
DAEMON lattice daemon_path
FEATURE LSC_ADVANCED lattice 10 02-may-2004 1 \
      8C9136CA9F6A "ispLEVER Advanced"
```

Edit the SERVER line by replacing the node name with the host name and the port ID (1710). The port ID must be unique, so you might need to change it.

To edit the Lattice DAEMON line, replace daemon\_path with the path to the Lattice daemon, as in this example:

```
<install_path>/isptools/ispcpld/bin/lattice
```

When editing these lines, type them exactly as you received them. All entries are case-sensitive..

### Note

---

The encryption codes are in hexadecimal format (digits 0-9, and lower-case letters a-f or upper-case letters A-F). Enter the number 0, not the letter O; enter the number 1, not the lower-case letter L.

---

## Starting the License Manager

Type the following command on one line to start the license manager daemon:

```
<install_path>/isptools/ispcpld/bin/lmgrd  
-l <install_path>/isptools/license/license.log  
-c <install_path>/isptools/license/license.dat
```

### Note

---

Redirecting output to a log file is helpful when you debug licensing problems. The `-l` switch tells the license manager to send its output to a log file (license.log), and `-c` tells it which license to serve. The log file contains information on the status of the server and the daemon and TC port in use. It also shows which users have checked out the license and the checkout time.

---

## Stopping the License Manager

*If it is necessary to stop the FLEXlm license manager, follow this procedure:*

1. Confirm that the daemon is running by typing the following command:

```
ps -ef | grep lmgrd
```

2. If `lmgrd.exe` is running, type the following command on one line to stop the daemon:

```
<install_path>/isptools/ispcpld/bin/lmutil lmdown  
-c <install_path>/isptools/license/license.dat
```

The following prompt appears:

```
Shutting down FLEXlm on nodes: hostname  
Are you sure? [y/n]:
```

3. Type **Y** and press **Enter** to shut down the license daemon.

---

## Post-Installation Configuration

---

The following sections give instructions on properly setting up the ispLEVER software for optimal performance after the software installation process.

### Setting User Permission

If the ispLEVER software is installed on a server and to be used by an account in the “users” group, make sure that account has the required permission to run the software. To do this, the administrator (root) should change the ispLEVER directory ownership to that “users” group, and set the access mode to 750 (rwxr-x---):

```
chown -R root:users <ispLEVER_installation_path>
chmod -R 750 <ispLEVER_installation_path>
```

If Synplify and Synplify Pro for Lattice are installed on a server and to be used by the “users” group members, change the Synplify/Synplify Pro directory ownership and the access mode in the same way.

### Linking to or Copying the Installation Directory

After installing the ispLEVER software, you might want to link the installation directory to another directory or copy the installation directory to another directory and set the installation path to the new directory.

*To link or copy the installation directory to another directory:*

1. If you want to link to the installation directory, create a soft link pointing to this location. If you want to copy the installation directory, choose the new path location and copy the files to it.
2. Set the NEW\_INSTALL\_PATH environment variable to the new directory location as follows:

```
setenv NEW_INSTALL_PATH <new_directory>/isptools
```

3. If you want to return to the original working directory, set the NEW\_INSTALL\_PATH variable as follows:

```
setenv NEW_INSTALL_PATH <original_directory>/isptools
```

## Using the Examples Directory

In order to use the design examples directory, you must copy the files from the server to your local system and change the write permissions. Copy the files from the server examples directory to the equivalent path and directory on your local system:

```
<install_path>/isptools/examples
```

## Running the ispLEVER Project Navigator GUI

The ispLEVER software has a graphical user interface (GUI) called the Project Navigator. When you use the `ispgui` script command, the software automatically performs the environment setup.

### Note

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The ispLEVER UNIX software supports EDIF designs only. Schematic, VHDL, and Verilog design entries are not supported.

---

*To start the ispLEVER software Project Navigator GUI:*

1. Set the PATH environment variable as follows:

```
Set path = (<install_path>/isptools/ispcpld/bin $path)
```

### Note

---

If your license file (`license.dat`) is not under `<install_path>/isptools/license/license.dat`, you must set the `LM_LICENSE_FILE` variable to the location of your license file. For example:

```
setenv LM_LICENSE_FILE /<license_directory>/license.dat
```

---

2. Set the display environment as follows:

```
setenv DISPLAY <PC_IP_address_or_Workstation_Name>:0.0
```

3. Type the following script command in the command line:

```
ispgui
```

Refer to the online Help for more information about the Project Navigator.

**Avoiding Long PATH Errors in C-Shell** When running an ispLEVER tool such as the Design Planner in C-shell (csh) from the ispgui tool, an unusually long PATH variable (for example, 600-700 characters) will prevent its usage. Specifically, the csh truncates PATH, which causes error messages pertaining to missing run-time library and other errors related to this restriction.

To avoid this error, make sure that the path does not exceed the allowable length of 1024 characters for your particular version of csh. If you receive a “long path” error message, you must exit ispgui, reduce the path length, and attempt to open your design file using ispgui again.

## Running Synplify/Synplify Pro for Lattice

To run the Synplify or Synplify Pro for Lattice software as a standalone tool, go to the `<synplify_installation_path>/bin` directory and execute the script commands listed below. The software automatically performs the environment setup.

*For C-Shell users:*

- ◆ `synpwrap.csh` – Launches Synplify for Lattice
- ◆ `synpwrap_pro.csh` – Launches Synplify Pro for Lattice

*For Bourne Shell, Bash Shell, or Korn Shell users:*

- ◆ `synpwrap.sh` – Launches Synplify for Lattice
- ◆ `synpwrap_pro.sh` – Launches Synplify Pro for Lattice

## Finding the Installation History

When you install a service pack, control pack, or patch on a release, the ispLEVER software records a log of your installation history. You can find the history in the Project Navigator GUI.

*To view the installation history:*

1. Open the Project Navigator GUI.
2. Select **Help > About Project Navigator**.

## Specifying the Default Browser

You can specify a default browser on UNIX. In your \$PATH setting, specify the available browsers in order of preference. The preferred browser must be at the beginning of the list. By default, the ispLEVER graphical user interface (GUI) tools search the browsers in the following order:

1. Firefox
2. Mozilla
3. Netscape
4. HotJava
5. Mfcie

You must be sure that the browser that you want to use can be invoked in your shell. If no browsers are listed in the \$PATH statement, the GUI tools will open mfcie.

For example, suppose that both Mozilla and Netscape can be used on your system, but you want to use Mozilla as your default browser. You must place Mozilla before Netscape in your path. If Netscape resides in /usr/bin/netscape and Mozilla resides in /usr/local/bin, your path may be /usr/local/bin : /usr/bin. If you do not want to change the order of /usr/local/bin and /usr/bin, make a link to Mozilla in your \$HOME/bin directory, and always put your \$HOME/bin directory at the beginning.

### Note

If you have trouble viewing the ispLEVER Help using your default browser, check the browser's options to make sure that JavaScript is enabled.

## Running Multiple Versions of the Software

You can run multiple versions of ispLEVER at the same time from either the command line or the graphical user interface. You can run current and previous versions. However, the following restrictions apply:

- ◆ You cannot run a major release, such as 7.1, and one of its service pack releases, such as 7.0 SP1, at the same time. In addition, you must install the major release in one directory and in another directory install the major release and the service-pack release on top of it.
- ◆ One individual can install or run only one release at a time in UNIX or Linux. However, an individual can install or run one release in UNIX and at the same time run another release in Linux. Different individuals can install or run different releases at the same time in UNIX or Linux.

## Environment Variable Setup

The installation script creates two environment setup scripts:

```
<install_path>/isptools/ispcpld/bin/setup_lv.csh  
<install_path>/isptools/ispcpld/bin/setup_lv.sh (for Bourne/  
korn shell users)
```

If you want to set up your environment manually to run the ispLEVER software in batch mode—using programs such as `legacy2lci`, or `legacyglci`—you can use the environment setup scripts.

After editing your `license.dat` file and starting the FLEXlm license manager, source either the `setup_lv.csh` or `setup_lv.sh` file as follows:

```
source <install_path>/isptools/ispcpld/bin/setup_lv.csh
```

or

```
source <install_path>/isptools/ispcpld/bin/setup_lv.sh
```

## Configuring System Settings

You must configure your system settings by using the MainWin Control Panel, shown in Figure 1. Configurable settings include the following:

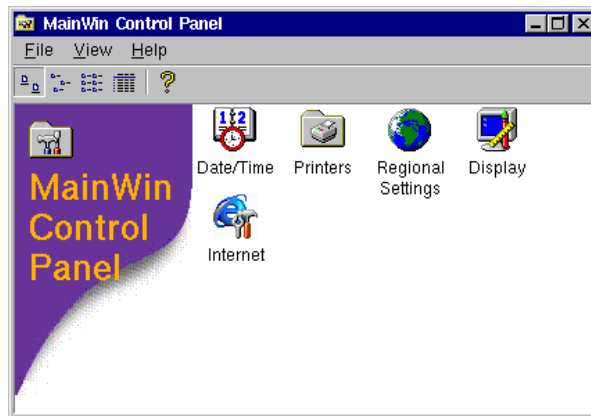
- ◆ Date/Time
- ◆ Printers
- ◆ Regional Settings
- ◆ Display
- ◆ Internet Options

*To configure your system settings:*

1. Navigate to `<install_path>/isptools/ispcpld/bin` directory, and type **ispsetting**.

The MainWin Control Panel appears, as shown in Figure 1.

**Figure 1: MainWin Control Panel**



2. Double-click the appropriate icon in the MainWin Control Panel to display dialog boxes for setting Date/Time, Printers, Regional Settings, Display, and Internet Options.

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## Updating the ispLEVER Software

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After you have registered and licensed your installation, check the Lattice Semiconductor Web site for new software updates, device support, and enhancements. Make sure that you have the latest software by checking for updates regularly.

*To activate ispUPDATE:*

1. From the command line, in the `<install_path>/isptools/ispcpld/bin` directory, type the following:

```
iupdate
```

The main ispUPDATE window appears, as shown in Figure 2.

**Figure 2: ispUPDATE Window**



2. In the main window, click **Setting**.

The Internet Connection Setting dialog box now appears with the Connections tab selected, as shown in Figure 3.

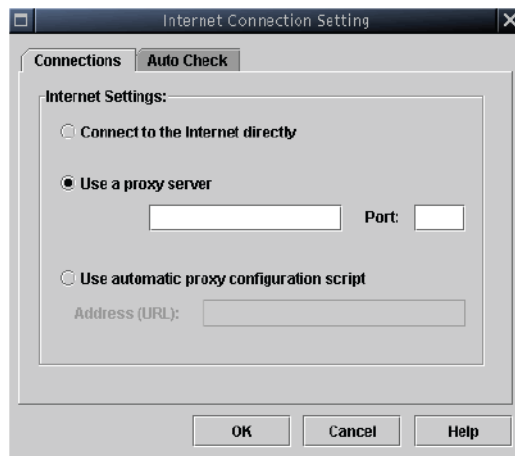
## Changing the Connection Settings

To enable the automatic checking, you must indicate how your computer accesses the Internet.

*To change the Internet connection settings:*

1. Select the **Connections** tab of the Internet Connection Setting dialog box, shown in Figure 3.

**Figure 3: Connections Tab**



2. Select one of the three Internet settings provided:
  - ◆ Connect to the Internet directly – Select this option if you do not have to go through a proxy server.
  - ◆ Use a proxy server – Select this option if you must go through a proxy server before connecting to the Internet. The proxy server prevents outsiders from breaking into your organization’s private network. Ask your system administrator for the URL address and port assignment. This option is turned on by default.
  - ◆ Use automatic proxy configuration script – Select this option if you have an automatic proxy configuration file. Ask your system administrator for the URL address and type it in the text box provided.

## Changing the Automatic Checking Settings

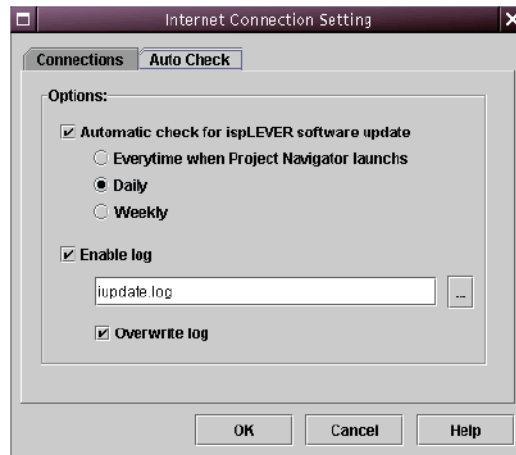
The Lattice Semiconductor software can automatically check for updates and activate a window showing the ispLEVER updates available.

To turn off or change the automatic update checking in ispUPDATE:

1. Select the **Auto Check** tab of the Internet Connection Setting dialog box.
2. If you want to enable the automatic checking for software updates, make sure that the **Automatic check for ispLEVER software update** option is selected. It is selected by default.

If you want to disable the automatic checking, clear the **Automatic check for ispLEVER software update** option, as shown in Figure 4.

**Figure 4: Disabling Automatic Checking in Auto Check Tab**



3. If you selected the **Automatic check for ispLEVER software update** option, indicate the frequency with which you want the checking to be performed: every time that the Project Navigator is started, daily, or weekly. A daily check is the default.
4. Select **Enable log** to keep a record of the ispLEVER update checking. When you select this option, a log is kept, even if automatic checking is not implemented. This option is selected by default.
  - ◆ If desired, rename the log file and select a different directory for the log file.
  - ◆ Select **Overwrite log** to save only the last log. This option is selected by default. Clear this selection to append each log to the previous one.
5. Click **OK**.

## Installing a Recommended Service Patch

When you use the Auto Check feature, ispUPDATE notifies you whenever a new service patch becomes available. You receive notification when you open the Project Navigator.

*To install the recommended service patch:*

Do one of the following:

- ◆ Click **Upgrade Now** to immediately install the service patch.
- ◆ Click **Download** to save the service patch to a directory and install it later.
- ◆ Click **Upgrade Later** to do nothing now. You can wait for the next automatic check or update manually at a convenient time.

*To manually check for and install a service patch:*

1. Close all ispLEVER tools.
2. On a command line, type `iupdate`.
3. In the dialog box, click **Update**.  
The ispUPDATE software goes online to check for service patches. If one is available, the Select ispLEVER Patch Version dialog box opens.
4. In the top portion of the dialog box, choose the desired installed version of ispLEVER and a service patch.
5. Click **Update**.

*To install a downloaded service patch:*

1. Close all ispLEVER tools.
2. Go to the location where you saved the service patch.
3. Double-click the service patch file and follow the on-screen instructions.

