

ispLEVER Classic 1.7 Installation Notice



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Type Conventions Used in This Document

| Convention | Meaning or Use |
|--|---|
| Bold | Items in the user interface that you select or click. Text that you type into the user interface. |
| <i><Italic></i> | Variables in commands, code syntax, and path names. |
| Ctrl+L | Press the two keys at the same time. |
| <code>Courier</code> | Code examples. Messages, reports, and prompts from the software. |
| <code>...</code> | Omitted material in a line of code. |
| <code>.</code> <code>.</code> <code>.</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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ispLEVER Classic 1.7 Installation Notice

This document provides installation instructions for the ispLEVER Classic software for Windows.

The ispLEVER Classic software supports Lattice Semiconductor ORCA[®] FPGA, FPSC, ispXPGA[®], ispXPLD[®], MACH[®], ispMACH[™], ispLSI[®], ispGDX2[™], ispGDX[®], ispGAL[®] and GAL[®] designs.

System Requirements

- ▶ Intel Pentium or Pentium-compatible PC
- ▶ Windows XP, Windows Vista (32-bit), or Windows 7 (32-bit and 64-bit)

Note

If your operating system is Windows Vista, make sure you have installed all the latest patches from Microsoft.

- ▶ 512 MB memory required; 1 GB memory recommended
- ▶ Approximately 3 GB free disk space required
- ▶ 1024 X 768 graphics display
- ▶ Microsoft-compatible mouse and mouse driver

Note

- ▶ ispLEVER Classic applications cannot use more than 2 gigabytes of memory space in the WinXP environment if the link flag is not properly updated.
-

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
- ▶ Literature Hotline: 1-888-ISP-PLDS (477-7537)
- ▶ Applications Support
Domestic: 1-800-LATTICE (528-8423)
International: (503) 268-8001
Fax: (503) 268-8556

Installing ispLEVER Classic Software for Windows

The following describes product options and installation instructions for the ispLEVER Classic 1.7 software.

The ispLEVER Classic 1.7 software consists of two modules as listed below:

- ▶ ispLEVER Classic 1.7 base module
- ▶ ispLEVER Classic 1.7 FPGA module

The above modules of the ispLEVER Classic 1.7 software can be downloaded from the Lattice web site. Go to <http://www.latticesemi.com/classic> for the download modules and instructions.

Base Module

The ispLEVER Classic base module includes the ispLEVER Project Navigator, and all the tools and device libraries you need to implement a design for any of the supported programmable families.

The base module also includes:

- ▶ The Lattice version of the Synplify Pro™ synthesis tool from Synopsys®. This allows you to target and synthesize your HDL designs for Lattice CPLD and FPGA products. Supported HDL languages include; VHDL, Verilog 1995, Verilog 2001.
- ▶ The Aldec Active-HDL® Lattice Edition II, which adds simulation capability from Aldec.

The supported devices are:

CPLD

- ▶ ispMACH 4000B/C/V/Z/ZE
- ▶ ispMACH 5000VG

- ▶ ispMACH 5000B (Obsolete)
- ▶ ispMACH 4A3/5
- ▶ MACH4 (Obsolete)
- ▶ MACH5
- ▶ ispXPLD 5000MX
- ▶ ispLSI 8000 (Obsolete)
- ▶ ispLSI 5000VE
- ▶ ispLSI 2000VE
- ▶ ispLSI 1000

SPLD

- ▶ GAL and ispGAL

GDX

- ▶ ispGDXVA
- ▶ ispGDX2

FPGA

- ▶ ispXPGA

These devices are supported by the Lattice gate-level logic simulator supporting ABEL/Schematic, VHDL, Verilog, and HDL/Schematic designs. Aldec Active-HDL Lattice Edition II simulator provides more advanced simulation capabilities.

Table 1 shows the product options of the ispLEVER Classic 1.7 base module.

Table 1: ispLEVER Classic 1.7 Base Module Product Options

| Product Option | Description |
|-------------------------------|--|
| ispLEVER Classic for Windows | Installs the ispLEVER Classic design tools for all Lattice Semiconductor ORCA FPGA, FPSC, ispXPGA, ispXPLD, MACH, ispMACH, ispLSI, ispGDX2, ispGDX, ispGAL and GAL device designs. Table 2 lists the tools included in this option. This option includes sub-features to set checksum and SVF options. |
| XPGAs | Installs Lattice ispXPGA™ devices. |
| ispLEVER Help | The ispLEVER Classic Help system Includes complete instructions for designing with ispLEVER Classic design tools and third-party tools. Also provides user manuals, tutorials, example design projects, and access to technical documentation from the Lattice Semiconductor Web site. |
| ispVM System | Installs the ispVM® System programming software for multi-vendor device programming. |
| Synplify Pro for Lattice | Synthesis tool from Synopsys. |
| Active-HDL Lattice Edition II | Simulation tool from Aldec. |

Table 2 shows the tools included in the ispLEVER Classic for Windows option.

Table 2: Tools included in the ispLEVER Classic for Windows Option

| Tool | Description |
|-------------------------------------|---|
| Project Navigator | The primary interface for the ispLEVER Classic software to ease project management. |
| Constraint Editor | Enables you to control and optimize ORCA 2, ORCA 3, ispXPGA, CPLD, and ispGDX designs. |
| ispXPGA Floorplanner | Provides graphical interface tools for setting constraints and managing ispXPGA device real estate. |
| Preference Editor | Enables you to specify many ORCA preferences to the logical preference file (.lpf). It supports ORCA Series 4 and FPSC devices. |
| Design Entry Tools | Includes the Schematic Editor, Text Editor, and Symbol Editor, which offer schematic, ABEL, VHDL, Verilog, EDIF, and mixed-mode design entry support. |
| EPIC Device Editor | Provides device editing capability for Engineering Change Management and detailed manipulation of ORCA FPGA implementation. |
| Hierarchy Browser and Navigator | Allows you to navigate through a design consisting of any combination of schematic and HDL modules. |
| ispEXPLORER | Helps you select settings for your CPLD and ispGDX designs that will achieve the best performance. |
| Lattice Logic Simulator | Performs logic simulation on ispGDX and CPLD designs. |
| Library Manager | Enables you to manage libraries of symbols that are used in your CPLD and FPGA designs. |
| Module/IP Manager | Enables you to create and instantiate parameterized modules and IP cores for CPLDs and ispXPGAs. |
| Performance Analyst™ | Enables you to measure the performance of designs implemented in Lattice Semiconductor devices through static timing analysis tool. |
| Report Viewer | Enables you to view, but not edit, the various report files generated by the ispLEVER Classic software in HTML format. |
| Revision Control System | Enables you to manage multiple design revisions of your project. |
| Tcl/Tk Scripting Tool | Enables you to automate ispLEVER Classic design processing. |
| Waveform Viewer and Waveform Editor | Displays the results of logic simulation and enables you to graphically create test stimuli. |

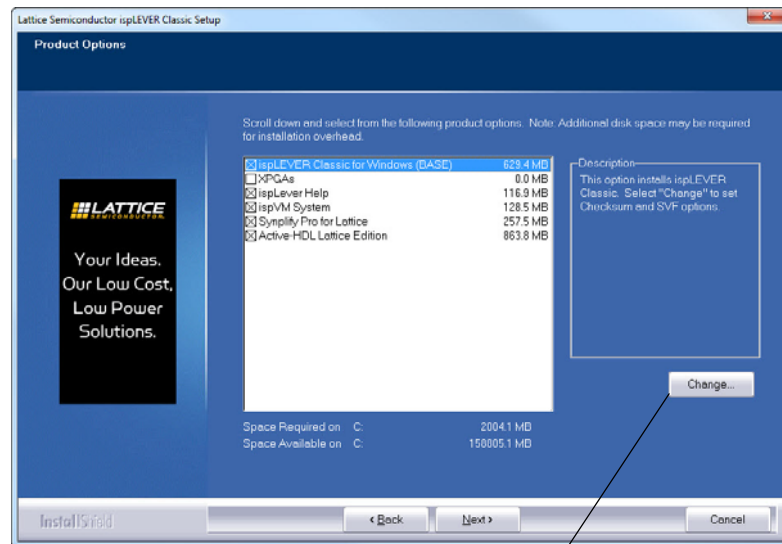
Installation Procedure

To install the Lattice Semiconductor ispLEVER Classic 1.7 base module:

1. Close all applications before starting ispLEVER Classic 1.7 base module installation.
2. Double click the ispLEVER Classic Base Module installer (.exe) you have downloaded to start the installation program manually.

3. The Welcome to Lattice Semiconductor ispLEVER Classic Setup dialog box appears.
4. Click **Next** to open the License Agreement dialog box.
5. Read the license agreement. If you agree, click **Yes** to open the Choose Destination Location dialog box.
6. The default destination folder is C:\ispLEVER_Classic1_7. Click **Browse** to change the drive or destination folder.
7. Click **Next** to open the Product Options dialog box, as shown in Figure 1.

Figure 1: Base Module Product Options Dialog Box



Click for additional options

8. Select the components that you want to install by selecting or clearing the check box next to each.

Some of the product options have additional options of their own, as shown in Table 3. To set the additional options, select that product option and then click **Change**.

Table 3: Base Module Product Options

| When you select: | Click Change to also select: |
|------------------------------|---|
| ispLEVER Classic for Windows | Use CHECKSUM as USERCODE default: Sets the default for USERCODE to CHECKSUM for CPLD devices. With this option, the ispLEVER Classic software inserts the JEDEC file's CHECKSUM value into the USERCODE field. If the ispLEVER Classic software is generating an ISC data file, it inserts the CRC value into the USERCODE field. SVF Generation: Installs the ispVM System and sets the default for SVF generation. |

9. Click **Next** to open the Select Program Folder dialog box. The default name of the program group is **Lattice Semiconductor ispLEVER Classic 1.7**. If you want to change the name, change it in the Program Folder field.

10. Click **Next** to open the Start Copying Files dialog box.
11. Verify the settings when displayed.
12. Click **Next** to start installing the selected components.
13. If you have selected the ispVM System option, you will be prompted to install drivers for using the ispDOWNLOAD[®] cable. Click **Yes**, and follow the instructions in “Installing Parallel Port Driver and USB Driver” on page 8.
14. The Setup Type dialog box appears that allows you to select licensing options for using Aldec Active-HDL Lattice Edition II simulator software. You can choose either Node-lock license or Floating License via USB key. By default, the node-locked license option is checked.

Note

A node-locked license is based on the physical (hard-coded) address provided by the network adapter. Network connectivity is not necessarily required for a node-locked license. In the absence of a network connection, you can install the NWLink IPX/SPX protocol to force the recognition of your NIC card ID.

A floating license requires access to the license server, so both a network adapter and connectivity are required.

15. In the dialog box that follows, verify the environment variables. Click **Next**.
16. In the InstallShield Wizard Complete dialog box, click **Finish**.

Note

Do not close the installation window. The window will be automatically closed when the installation completes.

FPGA Module

The FPGA module adds support for ORCA FPGA and FPSC devices.

Note that the Base Module must be installed prior to the FPGA Module.

The supported devices are:

FPGA

- ▶ ORCA FPGA
- ▶ ORCA FPSC

Table 4 shows the product options of the ispLEVER Classic 1.7 FPGA module.

Table 4: FPGA Module Product Options

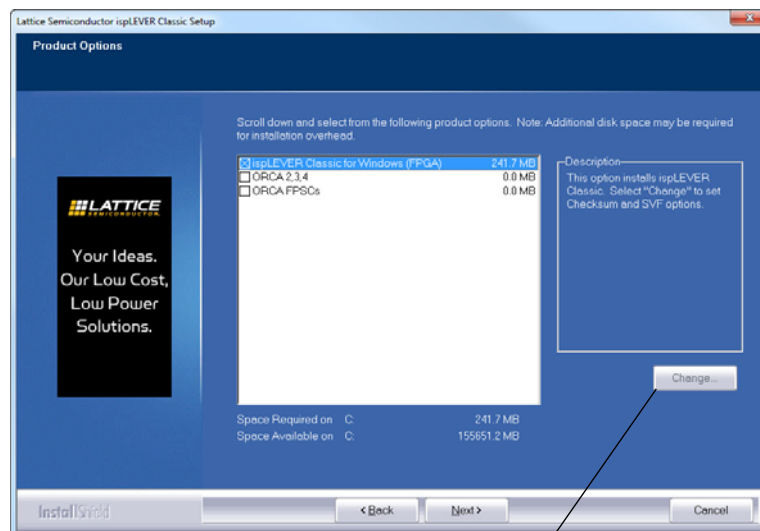
| Product Option | Description |
|----------------|--|
| ORCA 2,3,4 | Installs ORCA FPGA Series 2, 3, or 4 devices. This option includes sub-features to install ORCA 2, ORCA 3, or ORCA 4 FPGAs. |
| ORCA FPSCs | Installs ORCA FPSC devices. This option includes sub-features to install ORSPI4, ORSO42G5, ORSO82G5, ORT42G5, or ORT82G5 FPSC devices. |

Installation Procedure

After installing the base module, you can install the FPGA module.

1. Double click the ispLEVER Classic FPGA Module installer (.exe) you have downloaded to start the installation program manually.
2. The Welcome to Lattice Semiconductor ispLEVER Classic Setup dialog box appears.
3. Click **Next** to open the License Agreement dialog box.
4. Read the license agreement. If you agree, click **Yes** to open the ISP Software Already Exists in Selected Directory dialog box. The software will automatically be installed in the same folder in which the base module was installed. Click **Next** to open the Product Options dialog box, as shown in Figure 2.

Figure 2: FPGA Module Product Options Dialog Box



Click for additional options

5. Select the components that you want to install by selecting or clearing the check box next to each.
6. Some of the product options have additional options of their own, as shown in Table 5. To set the additional options, select that product option and then click **Change**.

Table 5: FPGA Module Product Options

| When you select: | Click Change to also select: |
|-------------------------|---|
| ORCA 2,3,4 | Specific ORCA series of FPGA devices. You can install software for some or all of the ORCA Series: ORCA 2, 3, or 4 FPGAs. |
| ORCA FPSCs | Specific ORCA FPSC devices. You can install software for some or all of the ORCA FPSC devices. If you install any, contact Lattice Semiconductor for a license. |

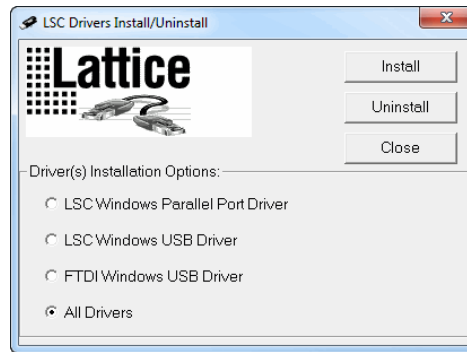
7. Click **Next** to open the Select Program Folder dialog box. The default name of the program group is **Lattice Semiconductor ispLEVER Classic 1.7**. If you want to change the name, change it in the Program Folder field.
8. Click **Next** to open the Start Copying Files dialog box.
9. Verify the settings when displayed.
10. Click **Next** to start installing the selected components.
11. When the files are completed copying, in the dialog box that follows, verify the environment variables. Click **Next**.
12. In the InstallShield Wizard Complete dialog box, click **Finish**.

Installing Parallel Port Driver and USB Driver

A parallel port or a USB driver is required to program Lattice devices using the ispDOWNLOAD Cables and the ispVM System software. You can install either or both of these drivers.

To install the parallel port driver, USB driver, or both:

1. In the LSC Drivers Install/Uninstall dialog box, select one driver or **All Drivers** to be installed, as shown in Figure 3.

Figure 3: LSC Drivers Install/Uninstall Dialog Box

2. If you selected **LSC Windows Parallel Port Driver** or **All Drivers** in step 1, select the desired parallel port driver under Parallel Port Driver Installation Options:
 - ▶ Driver's service starts on demand only (Default) – This driver allows PCs and laptops to enter system standby mode when ispVM System is not running. This mode reduces the power consumption of your PC or laptop.
 - ▶ Driver's service starts during startup of the system (Backwards Compatible) – This driver is backward-compatible with previous versions of ispVM System and ispDCD. However, it might prevent some PCs and laptops from entering system standby mode.
3. If another driver is already installed, you can click **Uninstall** if you want to remove it.
4. Click **Install**.
5. Click **OK**, and follow the installation instructions on the screen.

At the end of the installation, you must reboot your PC to load the driver.

Note

If you skip the LSC Driver Install process during installation, you can always install the drivers later from the ispVM System menu command.

Software Troubleshooting

If you encounter any software-related problems after installing the ispLEVER Classic software, review the following common troubleshooting scenarios before calling Lattice Semiconductor Technical Support:

- ▶ Ensure that your environment variable settings are set correctly, including the TEMP user variable. Your Windows system should contain the following system environment settings:

```
SET LSC_INI_PATH=<boot_drive>:\LSC_ENV
SET LM_LICENSE_FILE=<install_path>\license\license.dat
```

You can verify these settings by choosing **Start > Settings > Control Panel > System**. Select the Advanced tab and the “Environment Variables” section.

Note

The LM_LICENSE_FILE variable is a single line entry.

- ▶ Make sure that your system video display is set to a screen resolution of 1024 x 768 or more and that your video display is set to use 256 or more screen colors.
- ▶ If the ispLEVER Classic software is installed on a Windows XP, Windows Vista, or Windows 7 system with administrator privilege and to be used by an account in the “Users” group, make sure that the user account has permission to write the following folder and the configuration file in that folder:

```
<boot_drive>:\LSC_ENV  
<boot_drive>:\LSC_ENV\lsc_1_7.ini
```

- ▶ On Windows 7 or Windows Vista, when the User Account Control (UAC) is on, an “Unknown Publisher” dialog box will display when running multiple schematic designs because of the engine “updatesc.exe.” If this occurs, click **Yes** to continue.

Licensing for ispLEVER Classic

At the end of the installation, you will use the Web-based licensing capability to license your ispLEVER Classic software.

To use the software, you must receive a permanent Lattice Semiconductor software license based on the identification of your network interface card (NIC). The NIC ID or equivalent is the 12-character hexadecimal physical address. License your software early to avoid any down time.

To obtain a license file for your ispLEVER Classic software:

1. Go to Lattice Semiconductor Software Licensing page:
<http://www.latticesemi.com/Support/Licensing.aspx>
2. Select **ispLEVER Classic > Request a license**.
This displays the Lattice ispLEVER Classic Software Licensing page.
3. Follow the on-screen instructions.

You can also get the NIC via an alternate network interface, such as a wireless interface.

In the absence of a network connection, you can install the NWLink IPX/SPX protocol to force the recognition of your NIC card ID.

To install the NWLink IPX/SPX protocol:

1. Right-click **My Network Places** on the desktop and select **Properties**.
A list of all the networks available opens.
2. Right-click **Local Area Network** and select **Properties**.
3. In the Local Area Connection Properties dialog box that appears, perform the following steps:
 - a. Click **Install**.
 - b. Select **Protocol** and click **Add**.
 - c. Select **NWLink IPX/SPX**.
 - d. Click **OK** and follow the instructions on the screen.
4. If needed, reboot your machine.

Finding the Installation History

When you install a service pack or control pack, the ispLEVER Classic software records a log of the installation history, which you can find in the Project Navigator.

To view the installation history:

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

Optional Floating License Setup

The ispLEVER Classic software is typically available as a node-locked license. If you wish to use a floating license setup, a floating license must be obtained in one of the following ways:

- ▶ Contact Lattice at techsupport@latticesemi.com and request to receive a floating license.
- ▶ Have an existing paid subscription license (such as for Lattice Diamond® software) that includes a Classic license and is available as a floating license.

To enable a floating license, you must have a license server set up on a Windows NT server to monitor your ispLEVER Classic software license. Each client PC must have the LM_LICENSE_FILE variable set to point to the license file on the server.

Before you start the server setup, ensure that you have TCP/IP installed and that the client machines can communicate with the server by name. At the prompt in an MS-DOS window, type the following:

```
ping <hostname>
```

Table 6 lists files used for license management.

Table 6: License Management Files

| Filename | Location | Description |
|-----------------|----------------------------|---|
| lmgrd.exe | <install_path>\ispcpld\bin | The license server program |
| lmutil.exe | <install_path>\ispcpld\bin | FLEXlm utility for diagnosing, reporting, and controlling licensing |
| lmtools.exe | <install_path>\ispcpld\bin | Program that sets up the server for floating licenses |
| ispdsdmn.exe | <install_path>\ispcpld\bin | The Lattice Semiconductor licensing daemon |

Note

The ispLEVER Classic software uses FLEXlm 11.4 license administration software. Users of the ispLEVER 3.1 or older software must bring down the previous license daemon and start the new license daemon.

Editing the License File

Figure 4 is an example of a floating license file.

Figure 4: Sample Floating License File

```
SERVER nodename 00609779b32b 7788

DAEMON lattice daemon_path

FEATURE LSC_ADVANCED lattice 8.0 01-jan-9999 100 \
  65064C2A2E72 VENDOR_STRING="ispLEVER Advanced"
FEATURE LSC_ADVANCED_ORCA lattice 9.0 01-jan-9999 100 \
  64B2C5FE3CC1 VENDOR_STRING="ispORCA System"
FEATURE LSC_ADVANCED_ORLI10G lattice 9.0 01-jan-9999 100 \
  CC1A6BBEFD0 VENDOR_STRING="ORLI10G FPSC Design Kit"
FEATURE LSC_ADVANCED_ORSO42G5 lattice 9.0 01-jan-9999 100 \
  04433CFE0DD4 VENDOR_STRING="ORSO42G5 FPSC Design Kit"
FEATURE LSC_ADVANCED_ORSO82G5 lattice 9.0 01-jan-9999 100 \
  446798C64948 VENDOR_STRING="ORSO82G5 FPSC Design Kit"
FEATURE LSC_ADVANCED_ORSPI4 lattice 10.0 01-jan-9999 100 \
  05CDDD2801FB VENDOR_STRING="ORSPI4 FPSC Design Kit"
FEATURE LSC_ADVANCED_ORT42G5 lattice 9.0 01-jan-9999 100 \
  451449E5B54F VENDOR_STRING="ORT42G5 FPSC Design Kit"
FEATURE LSC_ADVANCED_ORT82G5 lattice 9.0 01-jan-9999 100 \
  B77DBD8D1DDF VENDOR_STRING="ORT82G5 FPSC Design Kit"
FEATURE LSC_ADVANCED_ORT8850 lattice 9.0 01-jan-9999 100 \
  0CD81194F576 VENDOR_STRING="ORT8850 FPSC Design Kit"
FEATURE LSC_ADVANCED_PLUS lattice 8.0 01-jan-9999 100 \
  2C2DBD2410E2 VENDOR_STRING="ispLEVER Advanced Plus"
FEATURE LSC_CLASSIC lattice 10.0 01-jan-9999 100 \
  1912E4676D74 VENDOR_STRING=LSC_CLASSIC
FEATURE LSC_SYNPLIFY lattice 8.0 01-jan-9999 100 \
  778544164512 VENDOR_STRING="ispLEVER System with Synplicity"
```

Note

The "\ " followed by a carriage return indicates a line continuation.

To edit the license file:

1. Edit the `SERVER` line by replacing `nodename` with the host name of the server for which you requested your `license.dat` file. You may also need to change the `PORT NUMBER` (7788).
2. Edit the `DAEMON lattice` line by replacing `daemon_path` with the path to the lattice daemon, for example:

```
C:\ispLEVER_Classic\ispcpld\bin\ispdsdmm.exe
```
3. When you are editing these lines, make sure they are entered exactly as you received them.

License Server Setup

To set up your license manager as a system service:

1. Copy the license file (license.dat) that you received from Lattice Semiconductor to `<install_path>\license\license.dat`.
2. Double-click the `<install_path>\ispcpld\bin\lmtools.exe` file to open the LMTOOLS dialog box.
3. Choose the **Config Services** tab in the LMTOOLS dialog box.
4. Change Service Name to **Lattice FLEXIm Service 1**.
5. Browse and set lmgrd.exe to `<install_path>\ispcpld\bin\lmgrd.exe`.
6. Browse and set the license file to `<install_path>\license\license.dat`.
7. Browse and set the debug log file to `<install_path>\license\lattice.log`.
8. Click **Save Service**.
9. Select the **Start/Stop/Reread** tab.
10. Click **Start Server**.
11. Select the **Config Services** tab.
12. Select **View Log** to view the lattice.log file. Check to see if there are any problems starting the license server. If there are no problems, close the log file.
13. Choose **Start > Programs > Lattice Semiconductor ispLEVER Classic 1.7 > ispLEVER Classic Project Navigator** to verify license checkout (this will be reflected in the lattice.log file). Close ispLEVER Classic.
14. Choose the **Start/Stop/Reread** tab in the LMTOOLS dialog box.
15. Select **Stop Server**.
16. Select the **Config Services** tab. Select **Use Services** and **Start Server at Power-Up**.
17. Click **Save Service** and then select **File > Exit**.
18. Restart the Windows server system.
19. Start the ispLEVER Classic software again to verify that the license server is running as a service.

Windows XP License Server Setup for Active-HDL Lattice Edition

If you want to use a floating license on a Windows XP system to run the Active-HDL Lattice Edition software, you should have a USB FLEXid keylock dongle and a separate license file (aldec_license.dat) for Active-HDL Lattice Edition. Before running the software, you need to install the dongle driver and set up the license server.

The steps below show you how to install the dongle driver and set up a Windows XP floating license server for Active-HDL Lattice Edition.

1. Obtain the USB FLEXid keylock dongle and the Active-HDL Lattice Edition license file (aldec_license.dat) from Lattice Semiconductor.
2. Install the driver files for the USB FLEXid keylock dongle by running `<ispLEVER_Classic_install_path>\active-hd\Drivers\HASP\hasp_driver_install.bat`.
3. Plug in the USB FLEXid keylock dongle to the PC that will run the license server.
4. Download the Aldec license daemon package from `ftp://reguser:reguser@ftp.aldec.com/daemons/11.4/aldec_windows_floating_license.zip`.
5. Unpack the zip archive to a directory where you want to install the license server.
6. Copy the license file (aldec_license.dat) to the directory where you unpacked the server.
7. Modify the license file (aldec_license.dat) as follows.
 - ▶ Modify the SERVER line to reflect the nodename of your PC:


```
SERVER nodename FLEXID=9-xxxxxxxx 27000
SERVER myservername FLEXID=9-xxxxxxxx 27000
```
 - ▶ (Optional) Modify the VENDOR line to specify the vendor daemon path:


```
VENDOR ALDEC path_to_aldec
```

If the license file is in the local directory, you may remove the path parameter:

```
VENDOR ALDEC
```
8. Start the license server by running **startlicense.bat**.
9. Start the Active-HDL Lattice Edition software.

The Active-HDL License dialog box appears. Click **Run license information**. The Diagnose License dialog box then appears.
10. Confirm that the installation directory for Active-HDL is accurate and click **Next**. The Diagnose (License File) dialog box appears.
11. Specify the location of the license server using the syntax: `<TCP-port>@host_computer_name (27000@myservername)`. Click **Refresh**. Then click **Next**.
12. Click **Finish**.
13. Restart the Active-HDL Lattice Edition software.

Floating License Configuration

In this configuration, the ispLEVER Classic software is installed on your Windows license server (for license manager utilities and daemons) and on each client that uses the ispLEVER Classic software. This configuration gives the best run-time performance.

Install the ispLEVER Classic software on the license server first. After you receive your floating license and ensure that the license manager is running, install the ispLEVER Classic software locally on each client that will use the floating license.

Set your system variable LM_LICENSE_FILE to point to the <install_path>\license\license.dat file on the license server.

Note

The ispLEVER Classic software with floating license configuration is only licensed with ispLEVER. The ispLEVER Classic installation should point to the ispLEVER license.

License Troubleshooting

If you encounter problems with your license, refer to Table 7 for common FLEXlm error messages and possible causes or solutions.

Table 7: FLEXlm Error Messages

| FLEXlm Error Message | Possible Causes or Solutions |
|---|--|
| Invalid parameter [-42, 252] | <ul style="list-style-type: none"> ▶ The LM_LICENSE_FILE variable has not been set properly. ▶ The license file is invalid. ▶ An invalid feature is specified in the license file. |
| Invalid parameter [-42, 252:10061] Winsoc error code | <ul style="list-style-type: none"> ▶ You have a floating license, and the license daemon has not been started at the Windows NT server. ▶ The network connection between the server and the client has not been established. |
| Invalid parameter [-12, 122] Invalid returned data from license server | The node name of the Windows NT server does not match the one in your floating license file. |
| Invalid parameter [-5, 222] No such feature exists | The feature could not be found in the license file. |
| ! License Check Failed | You either have a node-locked license or you do not have a license file. Contact Lattice Semiconductor Technical Support for a valid floating license file. |

If you encounter any software-related problems, review the following common troubleshooting scenarios before calling Lattice Semiconductor Technical Support:

- ▶ Ensure that your environment variable settings are set correctly, including the **TEMP** user variable. Your Windows system should contain the following environment settings:

```
SET LSC_INI_PATH=<boot_drive>:\LSC_ENV
SET LM_LICENSE_FILE=<install_path>\license\license.dat
```

You can verify these settings by choosing **Start > Settings > Control Panel > System**. Select the **Advanced** tab and the **Environment Variables** section.

- ▶ Make sure that your system video display is set to a screen resolution of 1024 x 768 or more and that your video display is set to use 256 or more screen colors.

If the ispLEVER Classic software still does not run after you have installed your new license file and confirmed that your environment variables are correct, gather the following items:

- ▶ A screen capture showing the error message
- ▶ A text file that contains a listing of the environment setup for your PC. From an MS-DOS prompt window, issue the **set > env.txt** command.
- ▶ Your license.dat file

Combine these items in a zip file and e-mail it to techsupport@latticesemi.com. Include an explanation of the problem.

Running Multiple Versions

The ispLEVER Classic software enables you to run designs on platforms on which both the ispLEVER Classic and other versions of Lattice design tools are installed.

For versions of ispLEVER software before 3.0, the %FOUNDRY% and %FPSC% environment variables must be defined specifically for that release, and %PATH% must contain an entry pointing to %FOUNDRY%/bin/nt. These variables, which were set up automatically by the previous release's installer, must not be removed if you wish to continue using the older ispLEVER release.

Versions 3.0 and newer of the FPGA tools no longer require these variables and are not affected by installations of previous versions of ispLEVER software.

If you want to use command-line versions of the FPGA tools, you can do the following:

- ▶ Run them in the ispLEVER console window as is.
- ▶ Include in PATH an entry pointing to the following directory, and then run the program in a window outside of the Project Navigator:

```
<installation_directory>\ispfpga\bin\nt
```

Running ispLEVER Classic from a Remote Client

You can install the ispLEVER Classic software on a server and then set up a remote client to run the software across your network. A remote client setup program, `remotectl.exe`, can properly set up and prepare the client to run the ispLEVER Classic software remotely. This feature works for any number of users, all ispLEVER Classic software tools, and all supported devices.

Installation Procedure

To start the installation and run ispLEVER Classic remotely, follow the procedures in this section.

To install ispLEVER Classic software on the server:

1. On the server, install the ispLEVER Classic software in the designated folder, for example, *C:\LATTICE_SW\ispLEVER_Classic*. Specify a proper program group, for example, ispLEVER Classic Server.
2. Make sure that the ispLEVER Classic software on the server runs correctly.
3. Share the installation folder on the network, for example, *C:\LATTICE_SW\ispLEVER_Classic*.

To set up the remote client to run ispLEVER Classic remotely:

1. Map the shared network folder on the server to a local drive on the client, as in this example:

```
map \\<server_name>\LATTICE_SW to drive M:
```

Note

Windows 7 users should not map to a local driver. Instead, use \\<server_name>\LATTICE_SW, without mapping.

2. Go to ispLEVER Classic on the new drive at *M:\ispLEVER_Classic* and double-click the *remotedcl.exe* remote client setup program. This program installs examples and set environment variables on the client machine.
3. Specify the location of the server software, for example, *M:\ispLEVER_Classic*. The client setup program issues an error message if it does not find a key program in the specified location.
4. The remote client setup prompts you for the location on the client machine for installing the client files. Specify a proper location, for example, *C:\ispLEVER_Classic_client*. Make sure no blank spaces are used in the program path.
5. Specify a proper program group, for example, "ispLEVER Classic Client."
6. When the remote client installation is finished, set the *LM_LICENSE_FILE* environment variable to be the location of your license file. When you use a client-server setup, it is recommended that you use a floating license. Then set *LM_LICENSE_FILE=7788@nodename*. Confirm that it works by selecting and compiling one of the examples now on the client.

When All Else Fails

If the ispLEVER Classic software still does not run after you have installed your new license file and confirmed that your environment variables are correct, gather the following items:

- ▶ A screen capture showing the error message
- ▶ A text file that contains a listing of the environment setup for your PC. From an MS-DOS Prompt window, issue the **set > env.txt** command.
- ▶ Your license.dat file

Put these items into a zip file and e-mail it to techsupport@latticesemi.com, including an explanation of the problem.

