



Aldec Active-HDL Lattice Edition Floating License Setup (Windows/Linux)

Application Note

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Acronyms in This Document

A list of acronyms used in this document.

Acronym	Definition
HASP	Hardware Key
USB	Universal Serial Bus

1. Introduction

This application note complements the Diamond Installation Guide for Windows/Linux and describes how to set up a floating license server for Aldec® Active-HDL® Lattice Edition (LE) on a Windows or Linux workstation. Active-HDL LE for Windows may be licensed to run node-locked or floating using Windows, Linux, or UNIX license servers. The license server hardware and operating system are independent of the Active-HDL LE clients and it is a common practice, for example, to use a Linux or UNIX license server with Windows clients.

The following platforms support Active-HDL LE license daemons for Windows and Linux (Source: <http://support.aldec.com>):

- Windows – 2000/XP/Vista (32-bit)/Windows 7
- Linux – Red Hat Enterprise v3 (32-bit/64-bit)
- UNIX – Solaris 8, 9, 10

See the procedures below for floating license setup under Windows or Linux.

2. Installing an Aldec USB Keylock

In Windows or Linux floating license environments, the Aldec Active-HDL Lattice Edition (LE) simulator is licensed and run using an Aldec USB Keylock with FLEXid. USB FLEXid keylocks are labeled with a FLEXid number, in the format FLEXid=9/10-xxxxxxx, where x is a hexadecimal number. The FLEXid=9 (HASP) keylock is green, and the FLEXid=10 (WIBU) is blue, as shown in [Figure 2.1](#).



Figure 2.1. Aldec USB Keylocks with FLEXid

2.1. Aldec USB Keylock Drivers

Driver files can be obtained in any of the following locations:

- `<install_path>\active-hdl\license\drivers` subfolder of the Active-HDL LE installation directory
- Lattice Semiconductor licensing page at: <http://www.latticesemi.com/en/Support/Licensing#aldec>
- Aldec website at <https://www.aldec.com/en/support/resources/documentation/articles/1245>

To install a FLEXid USB Keylock on a Windows workstation:

1. Obtain a USB FLEXid keylock from Lattice Sales Representative (<http://www.latticesemi.com/en/Buy/SalesLocator>).
2. Install the driver files for the USB FLEXid USB keylock onto the PC that runs the license server.
3. Install the driver files for the USB FLEXid keylock dongle by running the executable in the .zip file that matches your FLEXid version (9 or 10) and your system (x64 for 64-bit systems).
4. Plug in the USB FLEXid keylock to the license server PC.

To install a FLEXid USB Keylock on a Linux workstation:

1. Obtain a USB FLEXid keylock from the Lattice license administrator.
2. Install the driver files for the USB FLEXid USB keylock onto the PC that runs the license server. The kernel independent precompiled drivers are included in the *HDD_RPM_RedHat_i386.tar.gz* file.
3. Open a terminal shell and install the driver files for the keylock using the following commands:

```
su # becomes the root.  
rpm -e aksusbd-redhat # removes older version if it exists.  
rpm -i aksusbd-redhat-1.8.1-3.i386.rpm # installs the package.
```

4. Plug in the USB FLEXid keylock onto the server workstation.
5. Copy the akasusbd executable file into the same directory containing the install scripts.
6. Log in as root.
7. Execute the dinst script.

3. Floating License Setup (Windows)

The instructions below show you how to set up a Windows license server for Active-HDL LE.

To set up the Windows floating license server:

1. Download the Aldec License Daemon Package from the Lattice website at: <http://www.latticesemi.com/en/Support/Licensing#aldec> or from the Aldec website at: <https://www.aldec.com/en/support/resources/documentation/faq/1280>
2. Unpack the .zip archive to a directory where you want to install the server. The package contains the following files:
 - ALDEC – Aldec’s license daemon
 - Imgrd – License manager daemon
 - Imtools.exe – license administration tool
 - startlicense.bat – a batch file for starting the license server
 - stoplicense.bat – a batch file for stopping the license server
 - Imutil – FLEXIm utilities program
 - fnp_LicAdmin.pdf – detailed document on setting up the license server; provided by Flexera Software
 - fnp_GS-LF.pdf – describes the basic concepts of FLEXnet Licensing, license models, and concepts for designing license policies using License Files; provided by Flexera Software
3. Obtain the Active-HDL LE license file (*alt_license.dat*) from the Lattice license administrator.
4. Copy *alt_license.dat* to the directory where you unpacked the server.
5. Update environment variable LM_LICENSE_FILE with the path where you copied *alt_license.dat*.
6. Modify the SERVER line of *aldec_license.dat* to reflect the nodename of the workstation.

```
SERVER nodename FLEXID=9-xxxxxxxx 27000
SERVER myservername FLEXID=9-xxxxxxxx 27000
```

7. Modify the VENDOR line of *alt_license.dat* to specify the vendor_daemon_path to the Aldec license daemon (ALDEC.EXE) field.

```
VENDOR ALDEC path_to_aldec
VENDOR ALDEC c:\server_installation_dir\aldec.exe
```

8. To start the server, double-click the *<diamond_install_path>\isppga\bin\nt64\Imtools.exe* file to open the LMTOOLS dialog box.
9. Choose the **Config Services** tab in the **LMTOOLS** dialog box.
10. Change **Service Name** to **Lattice FLEXIm Service 1**.
11. Browse and set *Imgrd.exe* to *<install_path>\isppga\bin\nt64\Imgrd.exe*.
12. Browse and set the license file to *<install_path>\license\license.dat*.
13. Browse and set the debug log file to *<install_path>\license\lattice.log*.
14. Click **Save Service**.
15. Select the **Start/Stop/Reread** tab.
16. Click **Start Server**.
17. Start the Active-HDL Lattice Edition software. The **Active-HDL License** dialog box appears. Click **Run license information**. This opens the **Diagnose License** dialog box.
18. Confirm that the installation directory for Active-HDL is accurate and click **Next**. The **Diagnose License File** dialog box appears.

Note: (For ActiveHDL 10.3 or older) Specify the location of the license server using the syntax: *<TCPport>@host_computer_name* (27000@myservername). Click **Refresh**. Then click **Next**.
19. Click **Finish**.
20. Restart the Active-HDL Lattice Edition software.

4. Floating License Setup (Linux)

The instructions below show you how to set up a Linux license server for Active-HDL LE.

To set up a Linux floating license server:

1. Download the Aldec License Daemon Package. This may be found on the Lattice website at: <http://www.latticesemi.com/en/Support/Licensing#aldec> or on the Aldec website at: <https://www.aldec.com/en/support/resources/documentation/faq/1279>
2. Create a directory where you wish to install the license server and copy the *aldec_<platform>_floating_license.tar.gz* package to this directory.
3. Unpack the package using the following command:

```
gzip -cd aldec_platform_floating_license.tar.gz | tar xf -
```

The package contains the following files:

- ALDEC – Aldec’s license daemon
 - Imgrd – License manager daemon
 - Imtools.exe – license administration tool
 - startlicense.bat – a batch file for starting the license server
 - stoplicense.bat – a batch file for stopping the license server
 - Imutil – FLEXlm utilities program
 - fnp_LicAdmin.pdf – detailed document on setting up the license server; provided by Flexera Software
 - fnp_GS-LF.pdf – describes the basic concepts of FLEXnet Licensing, license models, and concepts for designing license policies using License Files; provided by Flexera Software
4. Obtain the Active-HDL LE license file (*aldec_license.dat*) from the Lattice license administrator.
 5. Copy *aldec_license.dat* to the directory where you unpacked the server.
 6. Configure and start the License Server.

You can start the License Server two ways:

- Manually
- Automatically at system start up

To start the License Server manually, enter

```
./startlicense
```

To stop the license server manually, enter

```
./stoplicense
```

To start the License Server automatically at system start up, create a startup script that contains the following:

```
/<path_to_Imgrd>/Imgrd -c  
/<path_to_license>/license.dat -l  
/<path_to_tmp>/debug.log
```

Notes:

- For security reasons, the license server should not run as the user root.
- Clients on the network can use the network license only when the server daemon is running.
- To start the license server automatically at system start up, refer to the *Starting the License Server Manager on UNIX Platforms* section of the *LicensingEndUserGuide.pdf* manual installed with other license server files.

5. Specifying the Port for the License Server (Optional)

By default, the license server uses the port 27009. If you want to bind the license server to a specific port, you can specify the port number in the `aldec_license.dat` file. This may be convenient if several license servers run on the same machine.

To edit the `alt_license.dat` file:

1. Open the `alt_license.dat` file in your editor and locate the `SERVER <server_name> <host_id> <port_no>` line.
2. Replace the port number at the end of the line.
3. Restart the license server.

6. Troubleshooting

6.1. Keylock Driver Install

To verify the FLEXid USB Keylock driver installation on Windows, invoke the *lmtools.exe* located in the *\bin* subfolder of your Active-HDL installation folder. Under the System Settings tab, the FLEXID field should display the FLEXid of the dongle.

To verify the driver installation on Linux, invoke the *lmutil* with the following parameters:

```
./lmutil lmhostid -flexid
```

If the driver is installed correctly, you should see a message similar to the following example:

The FLEXlm host ID of this machine is "FLEXID=9-a2b2c845".

6.2. License and License Server Setup

If you experience problems setting up the license server, locate the license server log file and contact Lattice Semiconductor Technical Support.

- **Server Log File (Linux)** – The *./startlicense* script creates the log file in the server directory. The name of the log file is *debug.log*.
- **Server Log File (Windows)** – If the server is started with the *startlicense.bat* file, the *debug.log* file is created in the server directory.

If the LMTOOLS program is used, the log file path depends on user settings.

References

- FAQ: How do I install a new FLEXid USB keylock?
(<https://www.aldec.com/en/support/resources/documentation/articles/1245>)
- FAQ: Is there a quick way to set up an ALDEC License Server? (support.aldec.com)
- FAQ: How can I obtain license daemons? (support.aldec.com)
- FLEXNET Licensing, End User Guide (LicensingEndUserGuide.pdf)
- Lattice USB keylock drivers and floating license server daemons:
(<http://www.latticesemi.com/en/Support/Licensing#aldec>)

Technical Support Assistance

Submit a technical support case through www.latticesemi.com/techsupport.

Revision History

Revision 1.2, August 2019

Section	Change Summary
All	<ul style="list-style-type: none">• Changed document number from AN8079 to FPGA-AN- 02007.• Updated document template.• Added Disclaimers section.• Added Acronyms in This Document section.• Removed references to ispLEVER.
Introduction	Added reference to Diamond Installation Guide.
Installing an Aldec USB Keylock	<ul style="list-style-type: none">• Added USB FLEXid keylocks information.• Updated keylocks figure. <p>Under Aldec USB Keylock Drivers:</p> <ul style="list-style-type: none">• Updated references/links to the locations of keylock drivers.• Added Lattice Radiant software and Lattice Diamond to the note.
Floating License Setup (Windows)	<ul style="list-style-type: none">• Updated setup procedure• Updated links to the Lattice and the Aldec websites.
Floating License Setup (Linux)	<ul style="list-style-type: none">• Updated setup procedure.• Updated links to the Lattice and the Aldec websites.
References	Updated web links.

Revision 01.1, February 2014

Section	Change Summary
Introduction	Added Windows 7 to the list of supported platforms and operating systems.
Technical Support Assistance	Updated information.

Revision 01.0, June 2008

Section	Change Summary
All	Initial release.



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