
Libero® Software
Installation and Licensing Guide



Table of Contents

| | |
|--|-----------|
| General Information | 3 |
| Libero License Options | 3 |
| Operating Systems and Minimum System Requirements | 3 |
| 1 Obtaining Licenses | 5 |
| Obtaining a Paid License | 8 |
| Retrieving Copies of Existing Licenses | 11 |
| License Changes and Information | 11 |
| 2 Installing Licenses | 13 |
| Installing a Node Locked Disk ID License on Windows | 13 |
| Installing a Node-Locked USB Dongle License on Windows | 14 |
| Installing a Floating License on a Windows Server | 15 |
| Installing a Floating License on a Linux Server | 16 |
| Installing a Floating License on a Solaris Server | 16 |
| Connecting the Client PCs to the License Server | 16 |
| Installing a Server-Based Node-Locked License for Symphony Model Compiler AE, Symphony HLS AE or Synplify DSP AE | 17 |
| 3 Installing Libero Software | 19 |
| Installing Libero on Windows | 19 |
| Installing Optional Tools on Windows | 25 |
| Installing Libero on Linux | 26 |
| A Product Support | 31 |
| Customer Service | 31 |
| Customer Technical Support Center | 31 |
| Technical Support | 31 |
| Website | 31 |
| Contacting the Customer Technical Support Center | 31 |
| ITAR Technical Support | 32 |

General Information

Libero software is downloadable for free from <http://www.actel.com/download/default.aspx> or you can order a free DVD from <http://www.actel.com/techdocs/litrequest/default.aspx>. Some Libero features are optional during installation. You can minimize the disk space required by only installing tools you use.

You must have a license to run Libero; the license type that you obtain determines what devices you can use and what IP is included. The following license types exist for Libero:

- Libero Platinum (All devices and RTL IP Bundle)
- Libero Gold (All Devices up to 1.5 Million system gates and Obfuscated IP Bundle)
- Libero Standalone (Libero without Synplify Pro AE or ModelSim AE and RTL IP Bundle)

View the complete descriptions of the above Libero installations at <http://www.actel.com/products/software/libero/licensing.aspx>.

View the IP Bundle contents at <http://www.actel.com/products/ip/directcores.aspx>

Libero installation is covered in "Installing Libero Software" on page 19.

Libero License Options

You must have a license installed to run Libero. Several license options are offered. The license defines the available FPGA devices, the license expiration date, and the maximum version of the software that can be used with the license.

View the tool and device support for the various licenses at <http://www.actel.com/products/software/libero/licensing.aspx>

Two license types are offered: node-locked or floating. A node-locked license is locked to a specific hard disk ID or movable USB hardware key dongle. A USB dongle with the accompanying license file allows the software to operate on any PC to which the dongle is attached and the license file and software are installed.

Node-locked license installation is covered in "Installing Licenses" on page 13.

A floating license is typically installed on a network server (Windows, Linux or Solaris) and allows networked client PCs to access the license from the server. The Client PCs can be Windows or Linux OS. Libero software is not available for Solaris Operating Systems. Client seats can be purchased to allow up to 999 users to run the Libero software simultaneously.

Libero license manager and vendor daemons for all supported network server platforms are available at <http://www.actel.com/products/software/libero/licensing.aspx>.

Floating license installation is covered in "Installing Licenses" on page 13.

Operating Systems and Minimum System Requirements

Libero is supported on Windows XP/Vista/7 and RedHat Linux Operating Systems.

Details about current System Requirements are available at <http://www.actel.com/products/software/libero/sysreqs.aspx>.

1 – Obtaining Licenses

You must have a license to run Libero.

Free licenses are obtained directly from the Microsemi SoC website at <https://www.actel.com/portal/default.aspx?r=1>.

You must log in to your Microsemi Customer Portal. If you do not have a Portal Account you can register by clicking the **New User** link at the bottom of the page (Figure 1-1).



The screenshot shows the Microsemi Customer Portal sign-in page. At the top, there is a navigation bar with the Actel logo (with 'IS NOW' text) and the Microsemi logo. To the right of the logos are links for 'Product Updates', 'Customer Portal', and 'RSS', along with flags for Japan and China. Below the navigation bar is a horizontal menu with tabs: 'Home', 'Company', 'Products & Services', 'Documentation', 'Downloads', and 'Support'. The main content area has a left sidebar with a link to 'Email Portal Webmaster'. The main content area displays the breadcrumb 'Home » Customer Portal » Sign In' and a message: 'To access Actel's Customer Portal, please sign in below. If you are not a current registered user, click on "New User" to register.' Below this message are input fields for 'User Name:' and 'Password:', followed by a 'Submit' button. There is also a checkbox labeled 'Remember me on this computer.' At the bottom of the sign-in area are links for 'New User' and 'Forgot My User Name or Password'.

Figure 1-1 • Microsemi Portal Sign In Page

The License Registration page (Figure 1-2) enables you to request a free license, or, if you purchased a license from Microsemi, you can register by entering the software ID that was supplied to you by

Microsemi in the Register Purchased Product window. Software ID registration is covered in "Obtaining a Paid License" on page 8.



Figure 1-2 • Request Free / Register for a License Web Page

Microsemi has various free licenses available on the Request Free License Web Page (Figure 1-3). Click the specific license of interest. To see the details of each license type, click the list of available license options link in **License Descriptions**.

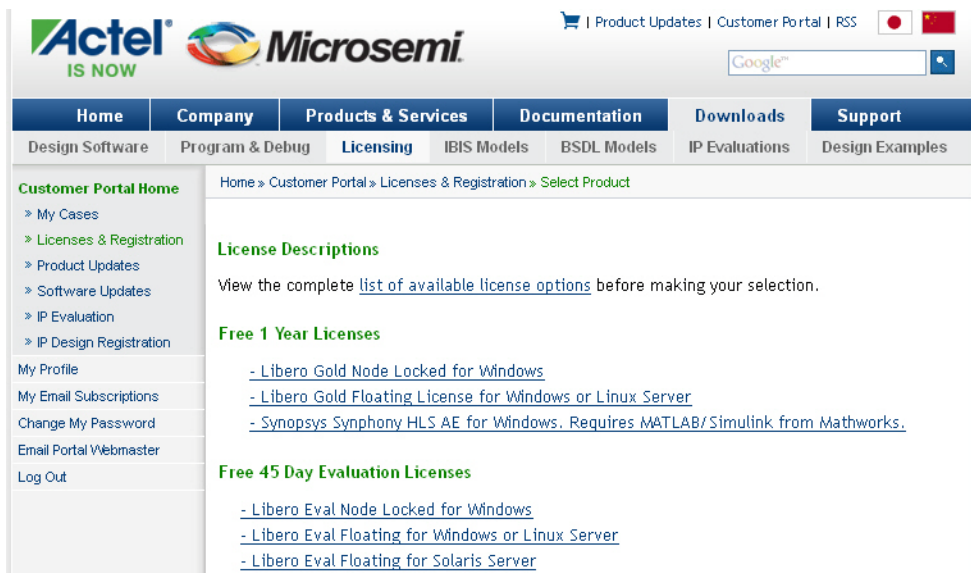


Figure 1-3 • Request Free License Web Page

If you select a Node Locked License, the registration page (Figure 1-4) requires the hard disk ID of the PC where the Libero SoC software will be installed.

If you are not sure how to find the hard disk ID, click the **How to find a DiskID, HostID, or MAC ID** link below the Disk ID entry field.

Input the Disk ID, and click the Submit button.

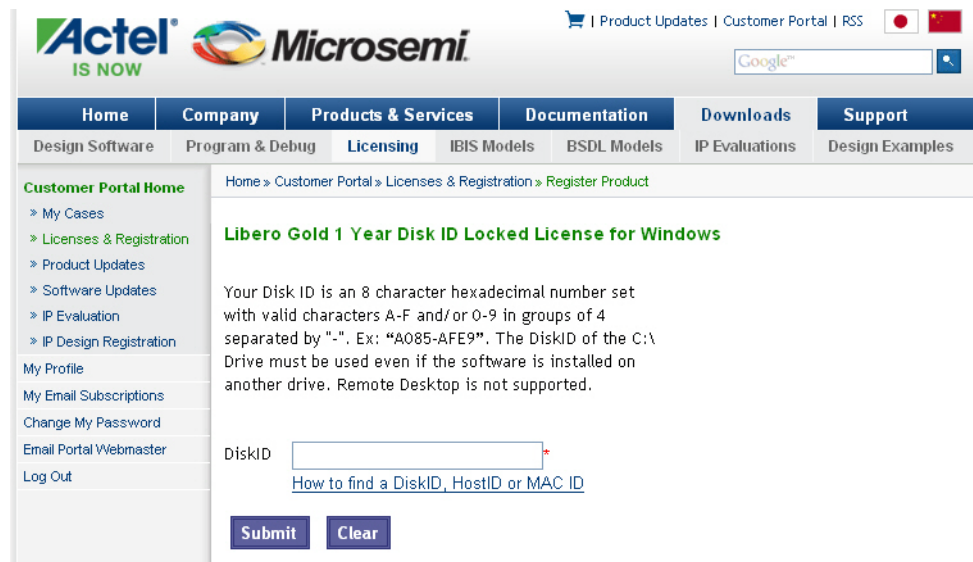


Figure 1-4 • Free License Disk ID and Registration Page

Print out or write down the software ID when the Registration Confirmation screen appears (Figure 1-5). Normally the license is generated and sent to your email address in less than 30 minutes. The license.dat file is an attachment to the email.

When the email and license arrive, follow the license installation instructions in "Installing Licenses" on page 13 of this guide.

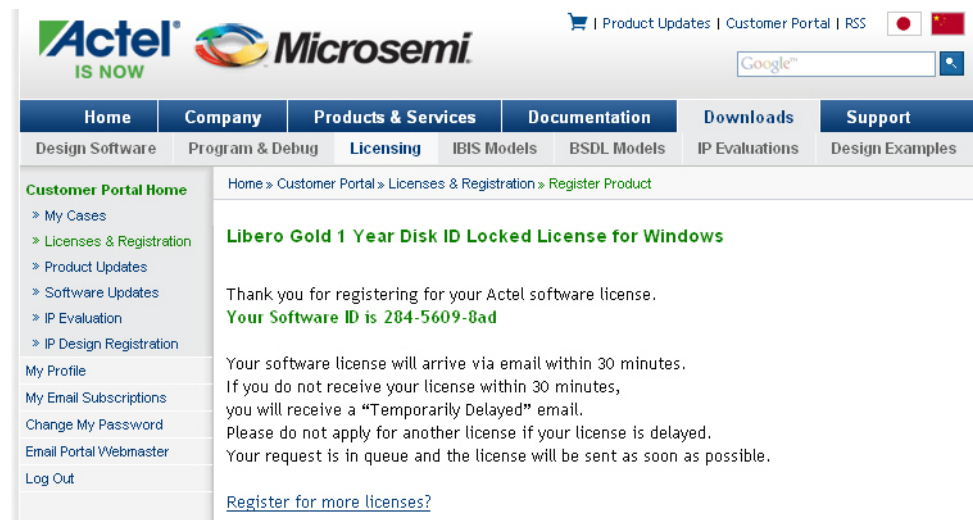


Figure 1-5 • Registration Confirmation Web Page

If you select a floating license type, the registration window requires your MAC ID for your Windows or Linux PC, or a Host ID for a Solaris server (Figure 1-6).

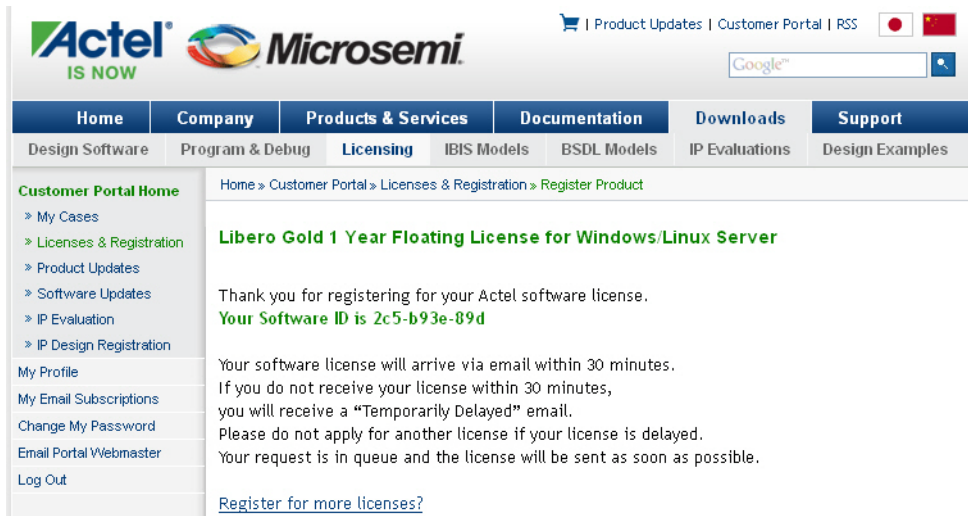
If you are not sure how to find your MAC ID or Host ID, click the **How to find a DiskID, HostID, or MAC ID** link below the MAC ID entry field.



The screenshot shows the Actel/Microsemi Customer Portal. The top navigation bar includes links for Product Updates, Customer Portal, RSS, and flags for Japan and China. A Google search bar is also present. The main navigation menu has tabs for Home, Company, Products & Services, Documentation, Downloads, and Support. Under Products & Services, there are links for Design Software, Program & Debug, Licensing, IBIS Models, BSDL Models, IP Evaluations, and Design Examples. The left sidebar lists various user actions like My Cases, Licenses & Registration, Product Updates, Software Updates, IP Evaluation, IP Design Registration, My Profile, My Email Subscriptions, Change My Password, Email Portal Webmaster, and Log Out. The main content area shows the breadcrumb trail: Home » Customer Portal » Licenses & Registration » Register Product. The title is "Libero Gold 1 Year Floating License for Windows/Linux Server". The text states: "Your MAC ID is a 12 character hexadecimal number set with valid characters A-F and/or 0-9. Ex: '1234abcd5678'". Below this is a text input field for the MAC ID, a link "How to find a DiskID, HostID or MAC ID", and two buttons: "Submit" and "Clear".

Figure 1-6 • MAC ID Based Registration Web Page

When finished, click the **Submit** button (Figure 1-6).



The screenshot shows the Actel/Microsemi Customer Portal registration completion page. The top navigation bar and main navigation menu are the same as in Figure 1-6. The left sidebar is also the same. The main content area shows the breadcrumb trail: Home » Customer Portal » Licenses & Registration » Register Product. The title is "Libero Gold 1 Year Floating License for Windows/Linux Server". The text states: "Thank you for registering for your Actel software license. Your Software ID is 2c5-b93e-89d". Below this, it says: "Your software license will arrive via email within 30 minutes. If you do not receive your license within 30 minutes, you will receive a 'Temporarily Delayed' email. Please do not apply for another license if your license is delayed. Your request is in queue and the license will be sent as soon as possible." At the bottom, there is a link "Register for more licenses?".

Figure 1-7 • Registration Complete

The Registration Confirmation web page (Figure 1-7) appears after you click the **Submit** button.

Print or write down the software ID on the Registration Confirmation web page. Normally the license is generated and sent to your email address in less than 30 minutes. The license.dat file is an attachment to the email.

When the email and license arrive, follow the license installation instructions in "Installing Licenses" on page 13 of this guide.

Obtaining a Paid License

You may purchase Libero Platinum and IP Cores through a Microsemi Sales Office. Visit <http://www.actel.com/products/software/libero/licensing.aspx> to see all available license types.

Upon receipt of the purchase order, you will be shipped a software DVD kit that includes a software ID number, usually on the back side of the DVD case. The number for Libero licenses is in the format L0XX-XXXX-XXXX.

Enter this software ID number in the Register Purchased Product window (Figure 1-8) and click the **Register Purchased Product** button.



The screenshot shows the 'Register Purchased Product' web page. The page has a header with the Actel and Microsemi logos, a navigation bar with links like Home, Company, Products & Services, Documentation, Downloads, and Support. A left sidebar contains links for Customer Portal Home, My Cases, Licenses & Registration, Product Updates, Software Updates, IP Evaluation, IP Design Registration, My Profile, My Email Subscriptions, Change My Password, Email Portal Webmaster, and Log Out. The main content area is titled 'Home » Customer Portal » Licenses & Registration'. It contains a message: 'To obtain a FREE Libero IDE, Synplicity Identify, Synplify DSP, or CoreConsole license, click the button below.' Below this is a 'Request Free License' button. A red box highlights the registration section, which includes the text: 'Please enter your unique software ID number. Your software ID number is located on the DVD jacket.' Below this text is a text input field containing 'LD51-9446-58XX' and a 'Register Purchased Product' button. At the bottom, there is a 'License Support Items' section with links to 'Actel License Troubleshooting Guide', 'Actel Libero Software License Agreement', 'USB License KEY Dongle Drivers', and 'Software DAEMONS for Server Licenses'.

Figure 1-8 • Register Purchased Product Web page

Depending on the type of license you purchased, the next web page (Figure 1-9 to Figure 1-11) will ask you for a hard Disk ID, USB Dongle number, MAC ID, or Host ID. If you are not sure how to find the hard DiskID, click the **How to find a DiskID, HostID, or MAC ID** link below the entry field.

Ascertain the DiskID, HostID, or MAC ID number, enter it into the window, and click **Submit**. See Figure 1-10 regarding identifying the USB Dongle number.



The screenshot shows the 'Libero Windows 1 Year Floating License' registration page. The page has the same header and navigation bar as Figure 1-8. The left sidebar is identical. The main content area is titled 'Home » Customer Portal » Licenses & Registration » Register Product'. It contains the heading 'Libero Windows 1 Year Floating License'. Below this is a message: 'Your MAC ID is a 12 character hexadecimal number set with valid characters A-F and/or 0-9. Ex: "1234abcd5678"'. There are two radio buttons for 'Single or Redundant' license server, with 'Single' selected. Below this is a 'MAC ID' label and a text input field. A red asterisk is next to the input field. Below the input field is a link: 'How to find a DiskID, HostID or MAC ID'. At the bottom are 'Submit' and 'Clear' buttons.

Figure 1-9 • Windows Floating License Registration Web Page

Floating licenses support the use of a single server. Enter the MAC IDs (Windows or Linux) or the Host IDs (Solaris) and click **Submit**.



The screenshot shows the "Libero Platinum 1 Yr USB Dongle License" registration page. The page has a header with the Actel and Microsemi logos, a navigation bar with links like Home, Company, Products & Services, Documentation, Downloads, and Support. A left sidebar contains links for Customer Portal Home, My Cases, Licenses & Registration, Product Updates, Software Updates, IP Evaluation, IP Design Registration, My Profile, My Email Subscriptions, Change My Password, Email Portal Webmaster, and Log Out. The main content area shows the breadcrumb "Home » Customer Portal » Licenses & Registration » Register Product" and the title "Libero Platinum 1 Yr USB Dongle License". Below the title, it states: "The required number is found on the USB Flex dongle and is a 10 character hexadecimal number set with valid characters A-F and/or 0-9. Ex: '9-5e700346'. Enter only the 8 characters following the 9-." There is a text input field labeled "FlexID 9-" with a red asterisk, and "Submit" and "Clear" buttons below it.

Figure 1-10 • USB Dongle License Registration Web Page



Figure 1-11 • Identifying the USB Dongle Hardware Key Number

The Registration Confirmation web page (Figure 1-12) appears when you click the **Submit** button. Your license will be emailed to you, usually within 30 minutes.

When the email and license arrive, follow the license installation instructions in "Installing Licenses" on page 13 of this guide.



The screenshot shows the "Registration Confirmation" page. It has the same header and navigation as Figure 1-10. The breadcrumb is "Home » Customer Portal » Licenses & Registration » Register Product". The title is "Libero Platinum 1 Yr USB Dongle License". The main content area says: "Thank you for registering for your Actel software license." Below this, it states: "Your software license will arrive via email within 30 minutes. If you do not receive your license within 30 minutes, you will receive a 'Temporarily Delayed' email. Please do not apply for another license if your license is delayed. Your request is in queue and the license will be sent as soon as possible." At the bottom, there is a link "Register for more licenses?".

Figure 1-12 • Registration Confirmation Web Page

Retrieving Copies of Existing Licenses

Copies of licenses can be obtained from Microsemi's website and Customer Portal. If you are the registered owner of a license, go to your Microsemi Portal Account at <http://www.actel.com/Portal/DPortal.aspx?v=1> and click the Licenses and Registration Link. A list of your software licenses is displayed, both current and expired. Click the software ID of the desired license and click the download button to obtain a copy.

License Changes and Information

Various license changes can be performed by Microsemi Customer Service or Tech Support:

- Change the owner of a license from one person to another. The new licensee must have a Microsemi Portal Account
- Change the Disk ID for a license
- Change the Server ID for a license
- Additional email ids can be added to a license registration

The registered owner of a license will be notified 15 days in advance of the license expiration date. An email will also be sent on the expiration date.

Libero Gold licenses can be renewed **NO MORE THAN 14 DAYS IN ADVANCE OF THE EXPIRATION DATE** by the license holder by going to their respective Portal Account, Licenses section. Locate the software ID of the expiring license and click Renew.

2 – Installing Licenses

As described in ["Obtaining Licenses" on page 5](#), after you have registered for a license at Microsemi's website, your license is automatically emailed to the address you provided. A license.dat file is attached to the email.

Installing a Node Locked Disk ID License on Windows

To install a node locked disk ID license on Windows you must:

- Save the license.dat file to your c:\ hard drive.
- Add or update your LM_LICENSE_FILE environment variable so it points to the new license.dat file.

To install a node locked disk ID license for Windows:

1. Create a folder named flexlm under your c:\ drive. You must install on your c:\ drive since at license registration your c:\ drive DiskID number was used.
2. Save the license.dat file in the flexlm folder. Alternately, you can save the license.dat in another folder in your c:\ drive, as long as you set the path in the Environment Variables to the folder containing the license.dat file. The instructions here are for the default location (c:\flexlm\license.dat).
3. From the **Start** menu choose **Settings > Control Panel**.
4. Double-click **System**.
5. In the Systems Properties dialog box click the **Advanced** tab.
6. Click the **Environment Variables** button.
If LM_LICENSE_FILE is already listed in User variables ([as shown in this video](#)) proceed to [Step 7](#). If not, go to [Step 9](#).
7. Select it, then click **Edit**.
8. Add the path to the Microsemi license.dat after any existing Variable value, separated with a semicolon (no space), or replace the existing Value.
Go to [Step 13](#).
If LM_LICENSE_FILE is not listed in USER VARIABLES ([as shown in this video](#)):
9. Click **New** under User Variable to create a new user variable. The New User Variable dialog box appears.
10. Type **LM_LICENSE_FILE** in the Variable name field.
11. Type **c:\flexlm\license.dat** in the Variable value field (or the path to where you installed the license.dat file).
12. Click **OK**.
13. Click **OK** to save new Environment Variables and return to System Properties.
14. Click **OK** to exit.

Installation is complete. Libero and all installed tools that require licenses are ready for use.

The following environment variables are optional and take precedent over LM_LICENSE_FILE:

- SNPSLMD_LICENSE_FILE is for Synopsys tools released in September 2010 and later (2010.09).
- SYNPLCTYD_LICENSE_FILE is used by earlier releases of Synplify Pro AE and Identify AE.

Follow [Step 3](#) through [Step 14](#) above ([as shown in this video](#)) if you want to set up one or both of these Environment Variables.

Installing a Node-Locked USB Dongle License on Windows

To install a node-locked USB dongle license on Windows:

1. Create a folder named flexlm on your c:\ drive.
2. Save the license.dat file in the flexlm folder. You can save the license.dat file in a different folder; if you do so, make sure the correct path is defined in LM_LICENSE_FILE.
3. From the Start menu choose **Settings > Control Panel**.
4. Double-click **System**.
5. In the Systems Properties dialog box click the **Advanced** tab.
6. Click the **Environment Variables** button.
If LM_LICENSE_FILE is not listed in user variables ([as shown in this video](#)), proceed to [Step 7](#); if LM_LICENSE_FILE is already listed in User variables, proceed to [Step 11](#).
7. Click **New** under User Variable to create a new user variable. The New User Variable dialog box appears.
8. Type **LM_LICENSE_FILE** in the Variable name field.
9. Type c:\flexlm\license.dat in the Variable value field. Do not put spaces in the path.
10. Click **OK**. Proceed to [Step 13](#).
If LM_LICENSE_FILE is already listed in User Variables ([as shown in this video](#)):
11. Select the existing LM_LICENSE_FILE and click **Edit**.
12. Add the path to the Microsemi license.dat after any existing variable value (separated by a space) or replace the existing value.
13. Click **OK**.
14. Click **OK** to save the new Environment Variables and return to System Properties.
15. Click **OK** to exit.

The following environment variables are optional and take precedent over LM_LICENSE_FILE:

- SNPSLMD_LICENSE_FILE is for Synopsys tools released in September 2010 and later (2010.09).
- SYNPLCTYD_LICENSE_FILE is used by earlier releases of Synplify Pro AE and Identify AE.

Follow [Step 3](#) through [Step 14](#) above ([as shown in this video](#)) if you want to set up one or both of these Environment Variables.

THE LIBERO INSTALLATION DOES NOT INSTALL FLEXLM DRIVERS FOR THE USB DONGLE. FOR DRIVERS AND DRIVER INSTALL INFORMATION, GO TO:
<http://www.actel.com/products/software/libero/drivers.aspx>.

16. Attach the USB dongle to your PC.

Note: Prior to USB driver installation, Microsemi recommends that you run the FlexLM Cleanup Utility found on <http://www.actel.com/products/software/libero/drivers.aspx>. Then, install the MacroVision

FlexLM installer that supports the Green FlexID USB Dongle. When this installer opens, select the FlexID 9 Option for the USB Dongle (Figure 2-1).

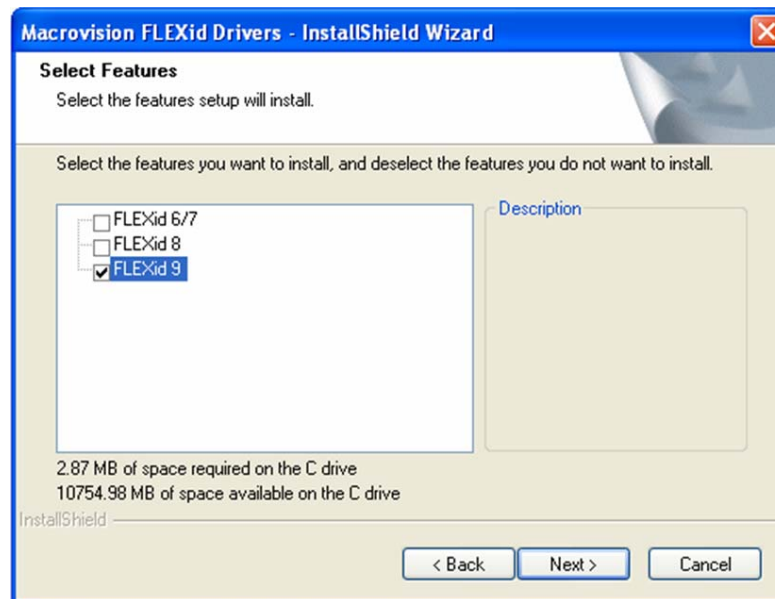


Figure 2-1 • Macrovision FLEXid Driver Installation Wizard

Libero is ready for use.

Installing a Floating License on a Windows Server

1. On the SERVER machine, save the license.dat file into a flexlm folder on your c:\ drive.
2. Download the required license manager daemons fro your server platform from <http://www.actel.com/products/software/libero/licensing.aspx#daemons>. In the License Server Daemons section, select the correct platform download. We recommend placing these files into the same location as the license.dat file
3. Open license.dat and edit the SERVER line by replacing <put.hostname.here> with your hostname. Do not include the brackets. Edit the port number (1702), if necessary, to any unused port.
4. Libero floating licenses include Libero, Synplify Pro AE, Identify AE and ModelSim AE tools. Edit each VENDOR and DAEMON line with the correct path to each vendor daemon and then save the license.dat file. For example:

```
VENDOR snpslmd C:\flexlm\snpslmd
DAEMON mgcld C:\flexlm\mgcld
DAEMON actlmgrd C:\flexlm\actlmgrd
```

5. Login to the SERVER machine and run the following command from the command prompt to start the server:

```
C:\flexlm\lmgrd -c C:\flexlm\license.dat>
```

Alternatively, if you prefer to have the License Manager output written to a Logfile, then run the following command at the command prompt:

```
C:\flexlm\lmgrd -c <path_to_license.dat>/license.dat -l <path_to_logfile>/license.log
```

Installing a Floating License on a Linux Server

1. On the SERVER machine, save the license.dat file.
2. Download the required license manager daemons for your server platform from <http://www.actel.com/products/software/libero/licensing.aspx#daemons>. In the License Server Daemons section, select the correct platform download. Microsemi recommends placing these files into the same location as the license.dat file.
3. Open license.dat using any editor. Edit the SERVER line by replacing <put.hostname.here> with your machine Hostname. Do not include the brackets.
4. Libero Linux floating licenses include Libero, Synplify Pro AE, Identify AE and ModelSim AE tools. Edit each VENDOR and DAEMON line with the correct path to each vendor daemon and then save the license.dat file.
5. Login to the SERVER machine and run the following command to start the license manager:

```
<path_to_lmgrd>/lmgrd -c <path_to_license.dat>/license.dat
```

Alternatively, if you prefer to have the License Manager output written to a Logfile, then run the following command at the command prompt:

```
<path_to_lmgrd>/bin/lmgrd -c <path_to_license.dat>/license.dat -l  
<path_to_logfile>/license.log
```

Installing a Floating License on a Solaris Server

Libero software is no longer available on Solaris. Solaris support is only provided for license server applications.

1. On the SERVER machine, save the license.dat file.
2. Download the required license manager daemons for your server platform from <http://www.actel.com/products/software/libero/licensing.aspx#daemons>. In the License Server Daemons section, select the correct platform download. Microsemi recommends placing these files into the same location as the license.dat file.
3. Open license.dat using any editor. Edit the SERVER line by replacing <put.hostname.here> with your machine Hostname. Do not include the brackets.
4. Libero floating licenses include Libero, Synplify Pro AE, Identify AE and ModelSim AE tools. Edit each VENDOR and DAEMON line with the correct path to each vendor daemon and then save the license.dat file.
5. Login to the SERVER machine and run the following command in a command terminal to start the license manager:

```
<path_to_lmgrd> /lmgrd -c <path_to_license.dat>/license.dat
```

Alternatively, if you prefer to have the License Manager output written to a Logfile, then run the following command at the command prompt:

```
<path_to_lmgrd>/lmgrd -c <path_to_license.dat>/license.dat -l  
<path_to_logfile>/license.log
```

Connecting the Client PCs to the License Server

For Client PCs where the FPGA design work will be done, Libero SoC is available for Windows and Linux RH Operating Systems.

To connect the Client PCs to a Windows, Linux, or Solaris license server:

Windows

On each client you must setup the LM_LICENSE_FILE environment variable from Control Panel > System > System Properties (Advanced tab) > Environment Variables.

Add or modify LM_LICENSE_FILE to include port@hostname.

Example: 1702@wpx-fpga

Linux

Use the following commands to set the environment variables on the CLIENT machine:

```
* setenv LM_LICENSE_FILE <path to license.dat file>/license.dat
```

The following environment variables are optional and take precedent over LM_LICENSE_FILE.

- SNPSLMD_LICENSE_FILE is for Synopsys tools released in September 2010 and later (2010.09).
- SYNPLCTYD_LICENSE_FILE is used by earlier releases of Synplify Pro AE and Identify AE.

Installing a Server-Based Node-Locked License for Symphony Model Compiler AE, Symphony HLS AE or Synplify DSP AE

Note: Installation and setup of this license is different from other Microsemi licenses.

Install Symphony Model Compiler AE software before installing this license file.

A Symphony Model Compiler AE license is a “server based node locked” license. If your PC has a license manager running, it is important to turn off the license manager before proceeding. Visit <http://www.flexerasoftware.com/support.htm#acresso> and consult the FLEXnet Publisher Lmgrd and Utilities Manual for installation instructions.

INSTALLING AND MANAGING LICENSE SERVER (Requires Administrator Access)

1. On the SERVER machine, create a folder for the license file and executables and save the license.dat to this folder. Microsemi recommends **c:\flexlm**.
You can save license.dat with another name if one already exists (such as symphony_license.dat).
2. Download the required license manager daemons for your server platform from <http://www.actel.com/products/software/libero/licensing.aspx#daemons>. In the License Server Daemons section, select the Windows daemon. Microsemi recommends placing these files into the same location as the license.dat file.
3. Open license.dat using any editor. SERVER & VENDOR lines must be edited.
4. Edit the SERVER line by replacing <put.hostname.here> with your machine Hostname. To find computer name: Start > Control Panel > Performance and Maintenance > System > Computer Name tab.
5. Edit the port number(1702) in the SERVER line, if necessary, to an unused port.
6. Edit the path_to_snpslmd in the VENDOR line to the location of your license server daemons.
7. Save and close the license file.
8. Login to the SERVER machine and run path_to_lmgrp/lmgrd -c path_to_license.dat/license.dat in a command terminal.

Set Environment Variables

9. Go to **Start > Settings > Control Panel > System > Advanced** tab.
10. Click the **Environment Variables** Button.
11. Select **New** under **User Variables**.
12. In the dialog box that appears, type **LM_LICENSE_FILE** in the variable line, and obtain the name of the server being used, and the port number in the value line. If the port is 1702 and the server is licenseserver, then:
Variable: LM_LICENSE_FILE
Value: 1702@licenseserver
13. To access multiple servers, type a semicolon between each port and server, and do not include a space between the specific paths. For example:
Value: 1702@licenseserver;1234@servertwo; ...

14. Click OK, and start the software.

The following environment variables are optional and take precedent over LM_LICENSE_FILE.

- SNPSLMD_LICENSE_FILE is for Synopsys tools released in September 2010 and later (2010.09)
- SYNPLCTYD_LICENSE_FILE is used by earlier releases

3 – Installing Libero Software

Libero is available for Windows or Linux.

Installing Libero on Windows

You can install Libero from a DVD or over the web. Your installation will vary slightly depending on which method you use.

If you have a USB Hardware Key Dongle license, DO NOT attach the USB dongle prior to installing Libero or USB drivers. The USB dongle must be attached after the software and USB driver installation. See "Installing a Node-Locked USB Dongle License on Windows" on page 14 regarding USB Driver installation.

Installing from the Web (Recommended)

If you want to install your software via the web you can download the Web Install, a small EXE file, to your local machine. Launch the EXE file, select the components you wish to install; only the files you select for installation are copied and installed to your local machine.

Installing from a DVD (or large EXE from the Web)

Insert the Libero DVD or double-click the file you downloaded from the web. A licensing information message appears. Click OK to view the Libero Install Wizard (Figure 3-1). From this wizard you can:

- Install Libero software
- Install Libero SA (Standalone) software

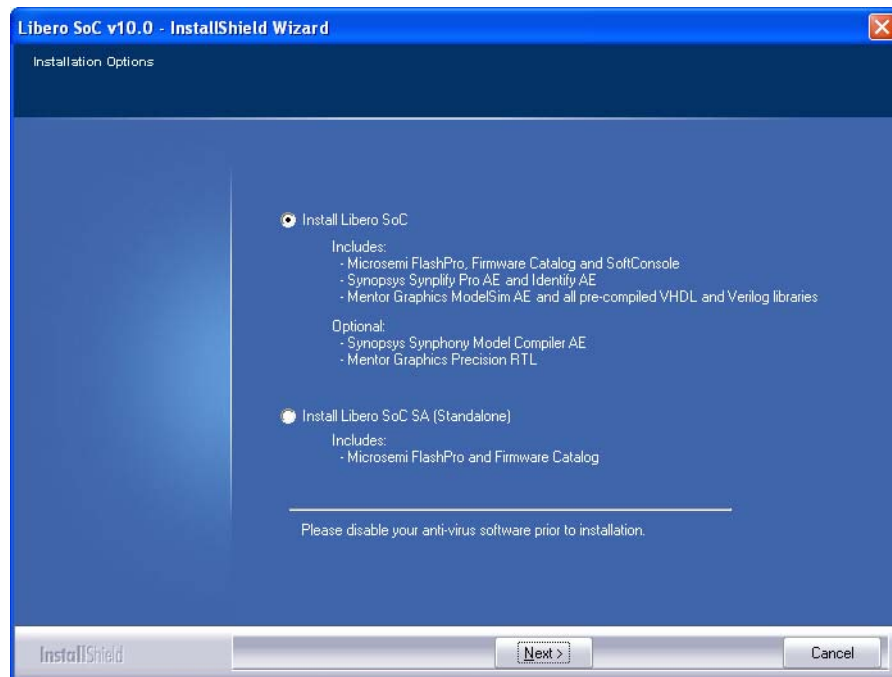


Figure 3-1 • Libero InstallShield Wizard

Make your selection and click **Next**.

Accept any change notifications and verify your license agreement. Libero is an integrated installation of all Libero tools, including the third party tools. The license agreement shown in Figure 3-2 is a combined license for all installed tools.

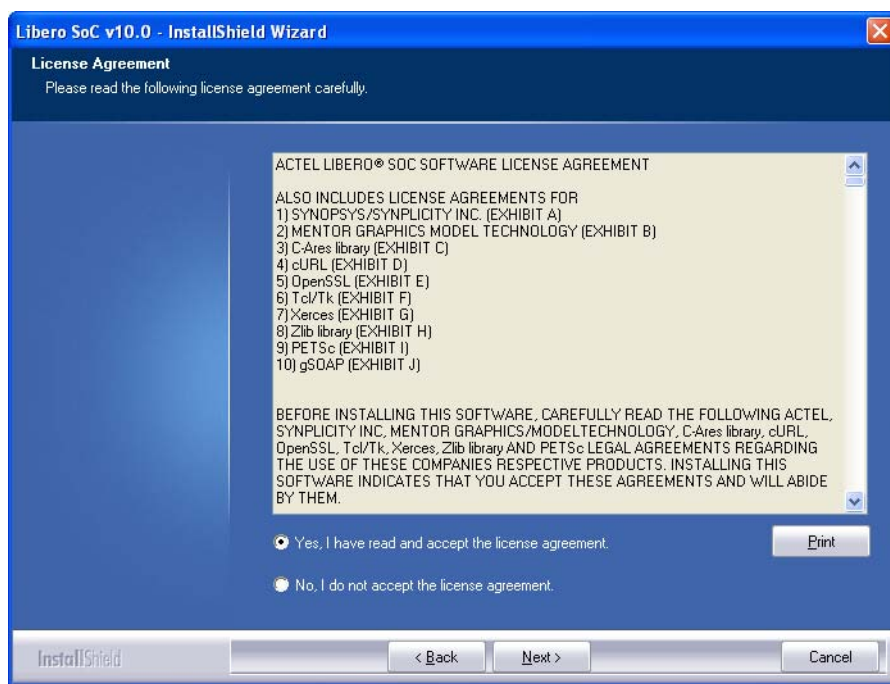


Figure 3-2 • Libero License Agreement

Read through the License Agreement. You must check **Yes** to proceed with the installation. Click **Next** to continue.

Select the installation directory ([Figure 3-3](#)). You may specify a different location than the default provided. Microsemi recommends that you do not install Libero on a remote directory. DO NOT install Libero to a directory with a space in the name.

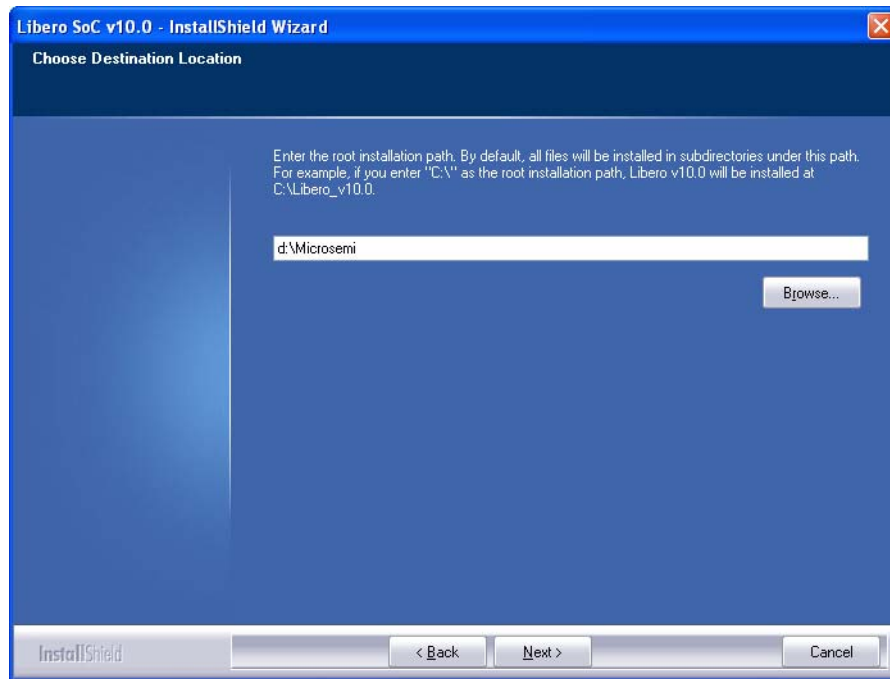


Figure 3-3 • Specify a Location to Install Libero

Click **Next** to continue.

Select Features - Select the Libero features that you wish to install ([Figure 3-4](#)).

Check the components you want to install in the Select Components window. Some Libero components are pre-selected for installation, identified as Required Features. You may check or uncheck other components as desired.

For releases prior to Libero v10.0 you will need to select the Microsemi family device simulation libraries that you want to use for your design, (IGLOOe, IGLOO, Fusion, etc.). VHDL and Verilog libraries are both installed automatically for the selected families. Some families are selected by default; to save disk space and installation time, you may uncheck those that you do not intend to use.

Uncheck any Libero components that you do not want to install.

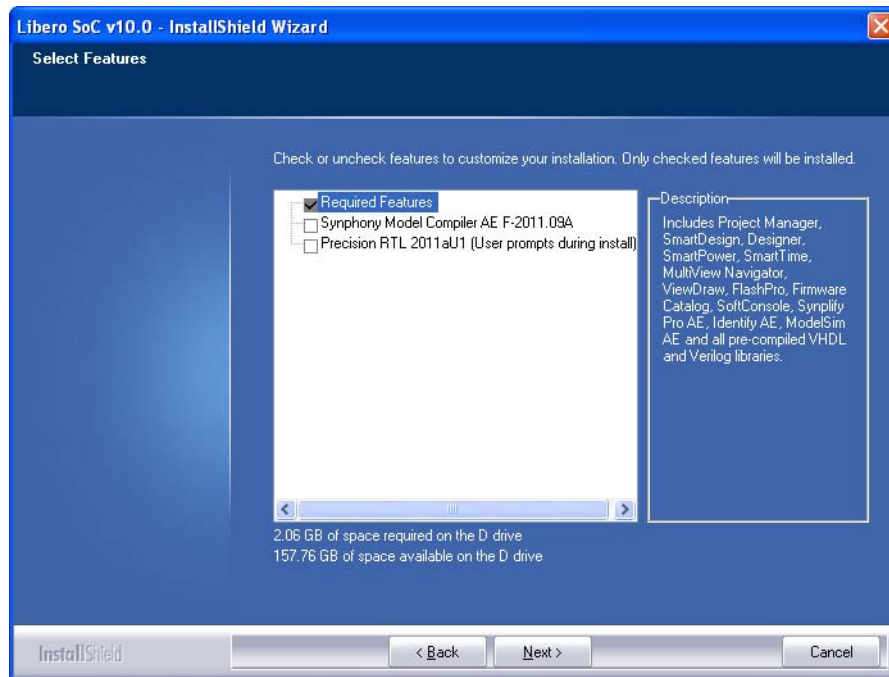


Figure 3-4 • Select Features

Click **Next**.

The installation needs to know if you will be connecting a FlashPro Lite or FlashPro programmer via the parallel port.

Click **Yes** or **No** as applicable.

The installation requires that you disconnect any FlashPro3 or FlashPro USB device from the PC.

Click **OK** after you have disconnected these devices.

Before installation, verify your installation Directories and Folders. The IP Vault Directory is where Microsemi DirectCores will be stored on your PC (Figure 3-5).

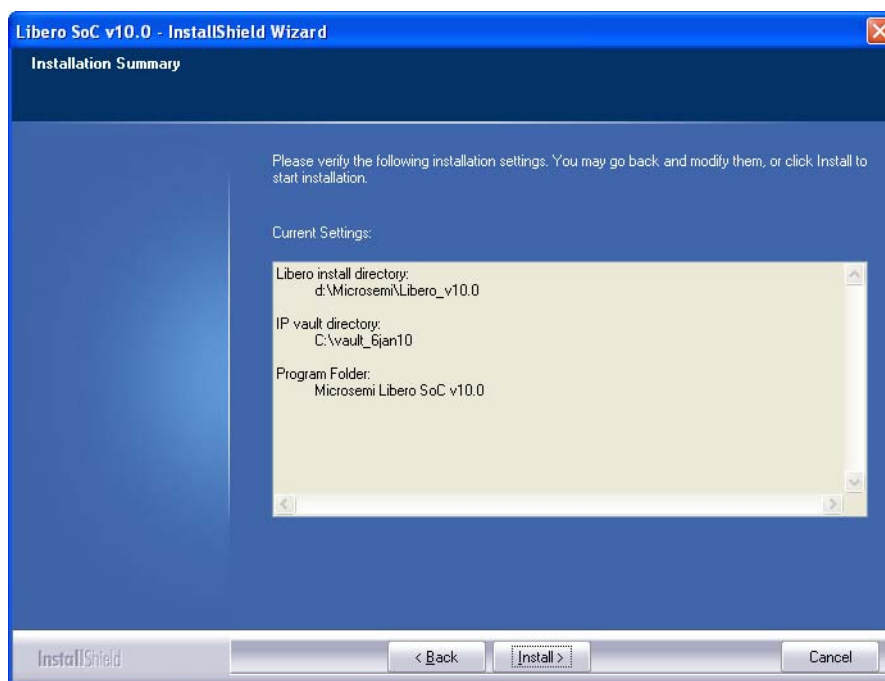


Figure 3-5 • Verify Directories and Program Folder Locations

Click **Install** to continue.

Once the desired components are selected or deselected, the Libero installation is automatic, meaning that each component will be installed serially until all components are installed. The installation progress bar appears.

To complete installation of FlashPro, you must connect your hardware to the PC after the final installation of Libero.

Click **OK** to continue.

After Libero is installed, the Licensing Requirements page appears (Figure 3-6). The license does not need to be installed to complete the installation, but you must have a license installed to run any version of Libero.

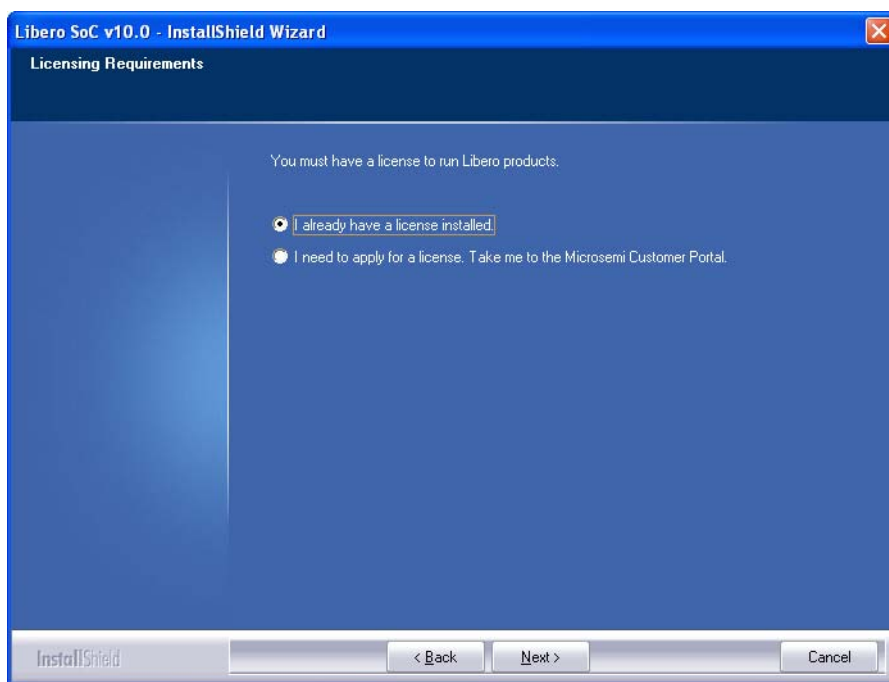


Figure 3-6 • Libero Licensing Requirements Reminder

If you already have a license installed, click **Next**.

If you need to apply for a license, click the **I need to apply for a license** radio button, and click **Next**. You will be taken to Microsemi's license registration website.

Registering for a license is covered in "Obtaining Licenses" on page 5.

Finally, the InstallShield Wizard Installation Complete page appears to indicate that installation is complete (Figure 3-7).

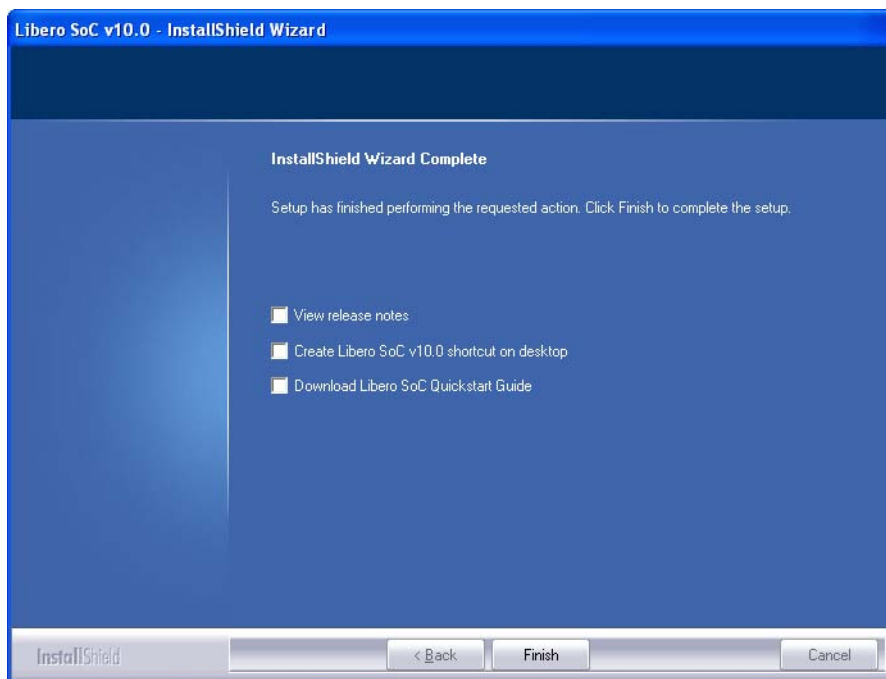


Figure 3-7 • Installation Complete

Check View the release notes and Create Libero shortcut icon on the desktop as needed.

Click **Finish**, and your Libero integrated tools are installed.

You can confirm all tools and libraries installed by going to **Start > All Programs > Microsemi Libero > About Your Installation**.

Installing Optional Tools on Windows

The following tools are available as part of the Libero installation; they are also available as standalone downloads to deliver incremental updates. They can be installed from the Select Features menu.

- Synopsys Synplify Pro AE
- Synopsys Identify AE
- Synopsys Symphony Model Compiler AE
- Mentor Graphics Precision RTL

Mentor Graphics Precision Synthesis Software Installation

To install Mentor Graphics Precision Synthesis Software, accept the license agreement, set the installation directory, click Next to proceed.

Set your Start menu and shortcut options and complete your installation.

Installing Libero on Linux

Installation in GUI Mode

Perform the following steps to install the software in GUI mode. This is the default installation procedure. For more information on installation in batch mode, see ["Installation in Batch Mode" on page 28](#).

Download the Installation file and double-click the executable or insert the Microsemi Libero DVD and type the following command at the prompt:

```
cd /cdrom/cdrom0 ./LiberoLU<version>_linux
```

The welcome window appears. Click **Next** to continue.

View and accept the Product Change Notification.

View and accept the license agreement.

Enter or browse to the same Microsemi parent directory as your past Libero installations. The installer creates a version-specific subdirectory under this parent directory. If this is your first Libero installation, enter or browse to a Microsemi parent directory under which you intend to install all future Libero installations. The default is: `/usr/local/actel/libero` ([Figure 3-8](#)).

Select your installation directory.

After you specify a directory, click **Next** to continue.

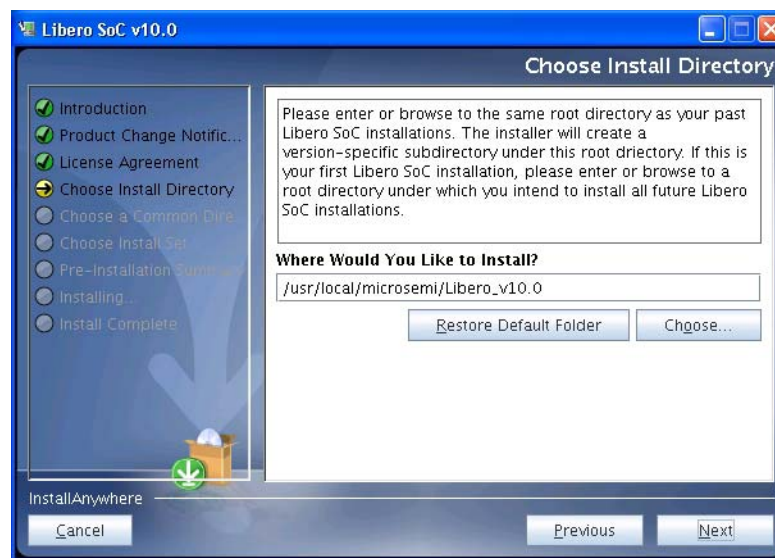


Figure 3-8 • Libero on Linux Installation Directory

Choose a Common File directory ([Figure 3-9](#)). Here you can store common files that are shared across different versions of Libero. The default Common File directory is `/usr/local/actel/common`.

If you have previously created such a directory, enter its path. If this is your first Libero installation on this PC, please enter or browse to a common directory that you intend to share with all future Libero installations.

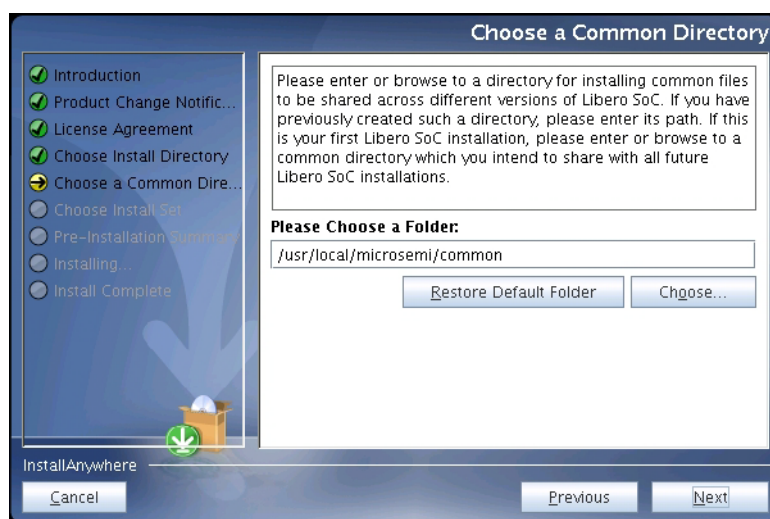


Figure 3-9 • Choose a Common Directory for Shared Files

Select the components you wish to install (Figure 3-10).

The default feature set for installation is:

- Libero
- Verilog Libraries
- VITAL Libraries
- Synplify Pro AE
- ModelSim AE
- ModelSim Precompiled Libraries - Not all family libraries are selected for installation by default; check to ensure that your target families are included.

Click **Next** to continue after selecting components to be installed.

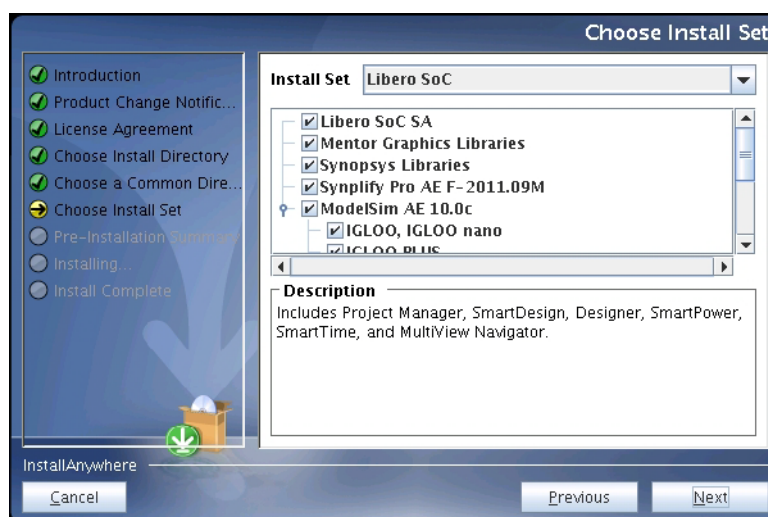


Figure 3-10 • Select Components

Review the Pre-Installation Summary dialog box and click **Install** to continue your installation. The progress bar appears; click **Done** to complete your installation.

Installation in Batch Mode

If you choose to install the software in batch mode, use the following steps:

Type the following command:

```
./LiberoLU<version>_linux -i console
```

The welcome screen appears and requests an installation folder.

Review the license agreement. The installer displays the license agreement one screen at a time. Press ENTER to view each page and continue. Type Y at the end of the agreement to accept and continue.

Specify the installation folder. Do not accept the default path. You must enter the same Microsemi parent directory as your past Libero installations. The installer creates a version-specific subdirectory under this parent directory. If this is your first Libero installation, enter a Microsemi parent install directory under which you intend to install all future Libero installations. Microsemi recommends using /usr/local/actel/libero as your parent installation directory.

Enter Y to confirm the installation folder.

Enter the absolute path for the Libero Common Directory. A Libero common directory is shared by multiple versions of Libero. Microsemi recommends that you use the common directory /usr/local/actel/common.

Confirm the Absolute Path for the Libero Common Directory.

Type the numbers that correspond to the software features you desire to have installed, separated by commas (Figure 3-11). For example, if you wish to install Synopsys Libraries, type the number 7. Default features are marked with an X.

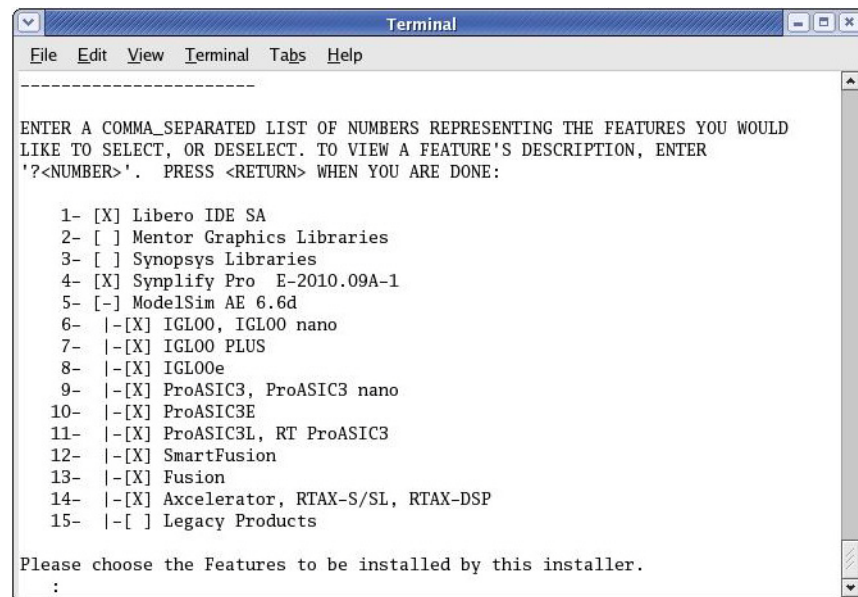


Figure 3-11 • Type the Number of the Software Features You Wish to Install

Review the pre-installation summary message. Press ENTER to continue. The installation progress bar displays your installation status.

Obtain and set up your license according to the instructions in "Obtaining Licenses" on page 5.

Tips for Launching Libero on Linux RH Operating Systems

Launch Libero using the following command:

```
<Libero_Installation_Folder>/Libero/bin/libero
```

Some Linux users might encounter the error message:

```
Error: Could not locate the Motif library in LD_LIBRARY_PATH
```

The Error relates to the existence of the Motif Graphical Toolkit Library which Libero uses for its Graphical Interface on Linux Operating Systems. Linux RH may or may not come with a Motif Library installed. If you have the Motif Library Installed, there should be an Environment Variable called LD_LIBRARY_PATH which points to the location of the Motif Library.

If you are unsure whether you have the Motif Library Installed, try the following commands:

The command “rpm -qa | grep -i motif” lists which Motif Library is installed

The command “rpm -qal | grep -i motif” lists the files and paths associated the motif library listed above (notice the extra “l” in the second command).

Ensure that the path of the Motif Library is contained in the LD_LIBRARY_PATH Environment Variable. You can add the path with the command:

```
set LD_LIBRARY_PATH = (<path to Motif Library> $LD_LIBRARY_PATH)
```

If you do not have a Motif Library Installed, consider downloading and installing OPEN Motif for free from <http://www.openmotif.org/>

Note that currently, Libero Linux tools expect to see the libXm.so.3 package of the Motif Library. Different versions of OPEN Motif could potentially install libXm.so.4 or others that are not compatible with Libero. Please ensure that the version of OPEN Motif used installs libXm.so.3. One example version which provides libXm.so.3 is openmotif v2.2.3.

Furthermore, since Libero is a 32-bit application, the 32-bit Motif Library must be used even if the computer is running a 64-bit Operating System.

Another Linux Warning Message that is possible when launching Libero is:

```
WARNING: Attempt to start the Wind/U registry appears to have failed.
```

This is addressed in the Known Issues Article located at the webpage

<http://www.actel.com/kb/article.aspx?id=KI64938>

If you encounter the error message below:

```
Wind/U X-toolkit Error: wuDisplay: Can't open display
```

Set the \$DISPLAY environment variable to :0 using the command

```
setenv DISPLAY :0
```

Then run the command

```
<Libero_Installation_Folder>/Libero/bin/actel_wuclean -R
```

If you encounter the error message:

```
Wind/U Error (248): Failed to connect to the registry on server <machine_name>
```

This type of error message may indicate that there is a Linux security setting that prevents Libero from connecting to the Wind/U Registry. This connection is typically made using a TCP port.

One way to resolve this error is to modify the Linux Security settings. For example, on RedHat Enterprise Linux 5 computers, navigate to the desktop menu **System > Administration > Login Screen > Security Tab** and Un-Check the Security Setting **Deny TCP connections to Xserver**. After making this change you must restart the computer and login again for the changes to take affect.

If any of the Tips presented in this section do not enable you to successfully launch Libero on a RedHat Linux computer, please contact Microsemi Technical Support at soc_tech@microsemi.com.

A – Product Support

Microsemi SoC Products Group backs its products with various support services, including Customer Service, Customer Technical Support Center, a website, electronic mail, and worldwide sales offices. This appendix contains information about contacting Microsemi SoC Products Group and using these support services.

Customer Service

Contact Customer Service for non-technical product support, such as product pricing, product upgrades, update information, order status, and authorization.

From North America, call 800.262.1060

From the rest of the world, call 650.318.4460

Fax, from anywhere in the world, 650.318.8044

Customer Technical Support Center

Microsemi SoC Products Group staffs its Customer Technical Support Center with highly skilled engineers who can help answer your hardware, software, and design questions about Microsemi SoC Products. The Customer Technical Support Center spends a great deal of time creating application notes, answers to common design cycle questions, documentation of known issues, and various FAQs. So, before you contact us, please visit our online resources. It is very likely we have already answered your questions.

Technical Support

Visit the Customer Support website (www.microsemi.com/soc/support/search/default.aspx) for more information and support. Many answers available on the searchable web resource include diagrams, illustrations, and links to other resources on the website.

Website

You can browse a variety of technical and non-technical information on the SoC home page, at www.microsemi.com/soc.

Contacting the Customer Technical Support Center

Highly skilled engineers staff the Technical Support Center. The Technical Support Center can be contacted by email or through the Microsemi SoC Products Group website.

Email

You can communicate your technical questions to our email address and receive answers back by email, fax, or phone. Also, if you have design problems, you can email your design files to receive assistance. We constantly monitor the email account throughout the day. When sending your request to us, please be sure to include your full name, company name, and your contact information for efficient processing of your request.

The technical support email address is soc_tech@microsemi.com.

My Cases

Microsemi SoC Products Group customers may submit and track technical cases online by going to [My Cases](#).

Outside the U.S.

Customers needing assistance outside the US time zones can either contact technical support via email (soc_tech@microsemi.com) or contact a local sales office. [Sales office listings](#) can be found at www.microsemi.com/soc/company/contact/default.aspx.

ITAR Technical Support

For technical support on RH and RT FPGAs that are regulated by International Traffic in Arms Regulations (ITAR), contact us via soc_tech_itar@microsemi.com. Alternatively, within [My Cases](#), select **Yes** in the ITAR drop-down list. For a complete list of ITAR-regulated Microsemi FPGAs, visit the [ITAR](#) web page.



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