

ISE Design Suite 11: Installation, Licensing, and Release Notes

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Revision History

The following table shows the revision history for this document.

Date	Version	Revision
04/27/09	11.1.0	Initial Xilinx release.
06/24/09	11.2	Updates for 11.2 release added to Chapter 1, "Release Notes for 11.2."
09/16/09	11.3	Updates for 11.3 release added to Chapter 1, "Release Notes for 11.2 and 11.3."
12/02/09	11.4	Updates for 11.4 release added to Chapter 1, "Release Notes for 11.2, 11.3 and 11.4."
3/16/10	11.5	Updates for 11.5 release added to Chapter 1, "Release Notes for 11.2, 11.3, 11.4 and 11.5."

About This Guide

This guide explains how to install and license ISE® Design Suite 11, which includes the Integrated Software Environment (ISE) software, ChipScope™ Pro software, Embedded Tools (including Embedded Development Kit (EDK) and standalone Software Development Kit (SDK)), System Generator, and PlanAhead™ design tools. It also describes how to use Xilinx® online documentation.

Information on what is new, known issues, and technical support for ISE Design Suite 11 software is also included.

Guide Contents

This manual contains the following chapters:

- [Chapter 1, “Release Notes for 11.2, 11.3, 11.4 and 11.5”](#)
- [Chapter 2, “What’s New, Release Notes, and Known Issues for 11”](#)
- [Chapter 3, “Operating Systems, Architecture Support, and System Requirements”](#)
- [Chapter 4, “Download and Installation \(11.1\)”](#)
- [Chapter 5, “Obtaining and Managing a License”](#)
- [Chapter 6, “Technical Support, Services, and Documentation”](#)

This manual contains the following appendix:

- [Appendix A, “Third-Party Licenses”](#)

Additional Resources

To find additional documentation, see the Xilinx website at:

<http://www.xilinx.com/support/documentation/index.htm>.

To search the Answer Database of silicon, software, and IP questions and answers, or to create a technical support WebCase, see the Xilinx website at:

<http://www.xilinx.com/support/mysupport.htm>.

To obtain the current version of the USB Cable Installation Guide, see the Xilinx website at:

http://www.xilinx.com/support/documentation/user_guides/ug344.pdf

To obtain the current version of the data sheet for Platform Cable USB II, see the Xilinx Website at:

http://www.xilinx.com/support/documentation/data_sheets/ds593.pdf

To obtain the current version of the data sheet for Parallel Cable IV, see the Xilinx Website at:

http://www.xilinx.com/support/documentation/data_sheets/ds097.pdf

Conventions

This document uses the following conventions. An example illustrates each convention.

Typographical

The following typographical conventions are used in this document:

Convention	Meaning or Use	Example
Courier font	Messages, prompts, and program files that the system displays	speed grade: - 100
Courier bold	Literal commands that you enter in a syntactical statement	ngdbuild <i>design_name</i>
Helvetica bold	Commands that you select from a menu	File > Open
	Keyboard shortcuts	Ctrl+C
Italic font	Variables in a syntax statement for which you must supply values	ngdbuild <i>design_name</i>
	References to other manuals	See the <i>Command Line Tools User Guide</i> for more information.
	Emphasis in text	If a wire is drawn so that it overlaps the pin of a symbol, the two nets are <i>not</i> connected.
Square brackets []	An optional entry or parameter. However, in bus specifications, such as bus [7:0] , they are required.	ngdbuild [<i>option_name</i>] <i>design_name</i>
Braces { }	A list of items from which you must choose one or more	lowpwr = {on off}
Vertical bar	Separates items in a list of choices	lowpwr = {on off}

Convention	Meaning or Use	Example
Vertical ellipsis . . .	Repetitive material that has been omitted	IOB #1: Name = QOUT' IOB #2: Name = CLKIN' . . .
Horizontal ellipsis ...	Repetitive material that has been omitted	allow block <i>block_name loc1 loc2 ... locn;</i>

Online Document

The following conventions are used in this document:

Convention	Meaning or Use	Example
Blue text	Cross-reference link to a location in the current document	See the section “ Additional Resources ” for details. Refer to “ Title Formats ” in Chapter 1 for details.
Red text	Cross-reference link to a location in another document	See Figure 2-5 in the <i>Virtex-5 Platform FPGA User Guide</i> .
Blue, underlined text	Hyperlink to a website (URL)	Go to http://www.xilinx.com for the latest speed files.

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Release Notes for 11.2, 11.3, 11.4 and 11.5

This chapter describes the changes to the ISE® Design Suite software in the 11.2, 11.3, 11.4 and 11.5 quarterly releases. This chapter comprises the following sections:

- [“Production Device Support”](#)
- [“Important Changes In 11.5”](#)
- [“Architecture Support”](#)
- [“Installation: Updating to 11.5”](#)
- [“Third-Party Additional License Agreement \(Effective Beginning in 11.4\)”](#)

For more information about what’s new in this release, see the What’s New documentation located at:

www.xilinx.com/support/documentation/sw_manuals/xilinx11/whatsnew.htm

For more information about features and fixes in this release, see:

<http://www.xilinx.com/support/answers/33216.htm>

Production Device Support

Xilinx® introduces production support for the following Spartan®-6 and Virtex®-6 devices in the 11.5 release:

Production Device Support

- Spartan-6 LX16 (-2C, -2I) speed files
- Spartan-6 LX45/T (-2C, -2I) speed files
- Virtex-6 LX240T (-1C, -1I, -2C, -2I) speed files
- Virtex-6 LX130T (-1C, -2C) speed files
- Support for future Spartan-6 and Virtex-6 production devices
- Updated speed files for all other Spartan-6 and Virtex-6 production devices

Note: Embedded Development Kit (EDK) support for all Spartan-6 and Virtex-6 device families is considered pre-production. EDK production support for these families will be provided in upcoming releases.

Note: Production devices will still have speed files labeled as “Preliminary” in the software.

For the latest status on production devices, please check the following data sheets.

Virtex-6: [Virtex-6 FPGA Data Sheet: DC and Switching Characteristics](#) (DS152) - See table entitled "Virtex-6 Device Production Software and Speed Specification Release."

Spartan-6: [Spartan-6 FPGA Data Sheet: DC and Switching Characteristics](#) (DS162) - See table entitled "Spartan-6 Device Production Software and Speed Specification Release."

Important Changes In 11.5

11.5 includes important updates and supports production devices for the Virtex-6 and Spartan-6 families. However, several workarounds may be required for Virtex-6 and Spartan-6 customers using 11.5. Please review software [Answer Record 32147](#), Spartan-6 [Answer Record 32651](#), and Virtex-6 [Answer Record 32929](#) before you upgrade to 11.5. The workarounds described in these answer records will be addressed in 12.1, scheduled for May 2010. Designers targeting families other than Virtex-6 or Spartan-6 do not need to install 11.5, and should remain at 11.4.

If you are using 11.5 for families other than Virtex-6 or Spartan-6, and you are experiencing errors or significant changes in the quality of results, it is recommended that you revert back to 11.4.

Logic Edition – Summary of Changes

- The Virtex-6 FPGA MMCM has the following new requirements:
 - ◆ When fixed phase shift, variable phase shift, or the Dynamic Reconfiguration Port (DRP) feature is used in the MMCM, a calibration circuit is required to be inserted into the user design.
 - ◆ The minimum VCO frequency of the MMCM is now 600 MHz (was 400 MHz.)
 - ◆ The CLKFBOUT_MULT_F attribute (the multiply of the MMCM) cannot be set to fractional values or a value of 3 or 4.

For more information on 11.5 Virtex-6 MMCM requirements, please see [Answer Record 33849](#).

- Average 5% faster performance for Spartan-6 -2 speedgrade, compared to 11.4, with latest speed files.
- Multi-Corner Timing Analysis for Spartan-6. The benefits of multi-corner timing analysis are:
 - ◆ Faster PERIOD performance due to decreased clock skew.
 - ◆ Faster I/O performance due to decrease min/max variation.

Embedded Edition – Summary of Changes

Installation of 11.5 breaks all Virtex-6 designs containing the Multi-port Memory Controller (MPMC) and Tri-mode Ethernet (LL_TEMAC). There are several workarounds to these issues that are required for Virtex-6 customers using EDK 11.5. Please review [Answer Record 34099](#) and [Answer Record 34678](#) before you upgrade to 11.5. These workarounds will be addressed in 12.1, scheduled for May 2010. Designers targeting families other than Virtex-6 or Spartan-6 do not need to install 11.5, and should remain at 11.4.

Installation of 11.5 results in implementation failures when targeting SP601 based dual processor designs generated using Base System Builder (BSB). For the workaround for this issue, please see [Answer Record 34566](#).

Xilinx IP Cores – 11.5 Changes and Requirements

This section briefly describes the changes and requirements for Virtex-6 and Spartan-6 designs.

Virtex-6 Designs

For Virtex-6 designs, the following IP have been updated for 11.5. The new 11.5 versions of these cores must be used to ensure proper functionality and timing. If you are using the following IP in a Virtex-6 design, each core should be regenerated in 11.5 and the design should then be re-implemented. If you are using EDK flows in 11.5, even with families other than Virtex-6, the updated IP cores may be incorporated automatically into your designs. This may produce results that differ from previous 11.x versions, and the design should be re-checked for validity.

- 10 Gigabit Ethernet MAC
- Aurora 64b66b
- Aurora 8b10b
- Block Memory Generator
- Clocking Wizard
- CPRI
- Embedded PCI Express Bridge (PCIe®)
- Ethernet 1000BASE-X PCS/PMA or SGMII
- FIFO Generator
- OBSAI
- RXAUI
- RapidIO Physical Layer Interface, RapidIO Logical (I/O) and Transport Layer Interface Core
- SPI-3 Link Layer
- SPI-4.2, SPI-4.2 Lite
- Tri-Mode Ethernet MAC
- Virtex-6 FPGA Embedded Tri-Mode Ethernet MAC
- Virtex-6 GTX Wizard
- Virtex-6 Integrated Block for PCI Express
- XAUI

Spartan-6 Designs

For Spartan-6 designs, the following IP have been updated for 11.5. The new 11.5 versions of these cores must be used to ensure proper functionality and timing. If you are using the following IP in a Spartan-6 design, each core should be regenerated and the design re-implemented. If you are using EDK flows, even with families other than Virtex-6, the updated IP cores may be incorporated automatically into your designs. This may produce

results that differ from previous 11.x versions, and the design should be re-checked for validity.

- SPI-4.2 Lite
- RapidIO Logical (I/O) and Transport Layer Interface Core
- RapidIO Physical Layer Interface Core
- Tri-Mode Ethernet MAC

Architecture Support

Virtex-6 and Spartan-6 Device Support

Virtex-6 and Spartan-6 devices support was added in ISE Design Suite 11.2, and updated in 11.4. Other supported architectures in 11 are found in [Table 3-4, page 25](#).

Table 1-1: Virtex-6 and Spartan-6 Device Support

	ISE WebPACK™	ISE Design Suite (Logic Edition, Embedded Edition, DSP Edition, System Edition)
Virtex Series	Virtex-6: LXT: XC6VLX75T, XC6VLX75TL	Virtex 6: <ul style="list-style-type: none"> • LX/T: All including "L" (lower power) devices • CXT: All • SXT: All including "L" (lower power) devices • HXT: All Note: Embedded Development Kit (EDK) 11.4 does not support the following devices: <ul style="list-style-type: none"> ◆ Virtex-6 LX/T L (lower power) ◆ Virtex-6 SXT L (lower power) ◆ Virtex-6 HXT EDK 11.4 provides early-access support only for remaining Virtex-6 LX/T and Virtex-6 SXT devices.
Spartan Series	Spartan-6: LX/T: XC6SLX4, XC6SLX4L, XC6SLX9, XC6SLX9L, XC6SLX16, XC6SLX16L, XC6SLX25, XC6SLX25L, XC6SLX25T, XC6SLX45, XC6SLX45L, XC6SLX45T, XC6SLX75, XC6SLX75L, XC6SLX75T XA* Spartan-6: All Note: Spartan-6 XC6SLX4, Lower Power Spartan-6, and XA devices are new in ISE WebPACK 11.4 * XA = Xilinx Automotive	Spartan 6: LX/T: All including "L" (lower power) devices XA Spartan-6: All Note: EDK 11.4 provides early-access support only for Spartan-6 devices.

Virtex-5 Device Support

Virtex-5Q series devices were released in 11.2. These devices are available in the ISE Design Suite software, not in ISE WebPACK or EDK 11.4.

Installation: Updating to 11.5

ISE Design Suite 11.5 is being delivered as an update that needs to be installed onto an existing 11.1, 11.2, 11.3 or 11.4 installation.

To update to 11.4:

1. Make sure you have ISE Design Suite 11.1, 11.2, 11.3 or 11.4 installed on your machine. If you do not have at least ISE Design Suite 11.1 installed on your machine, install it by following the instructions in [Chapter 4, "Download and Installation \(11.1\)."](#) See sections:
 - ◆ ["Downloading ISE Design Suite 11"](#)
 - ◆ ["Installing ISE Design Suite 11 - Overview for All Platforms"](#)
2. Upgrade your 11.1 or 11.2 version to 11.5 by following the instructions in [Chapter 4, "Download and Installation \(11.1\)."](#) See section:
 - ◆ ["Obtaining Software Updates"](#)

Third-Party Additional License Agreement (Effective Beginning in 11.4)

The following license agreement is effective in the 11.4 release.

Libconfig (v1.3.2) License

libconfig - A library for processing structured configuration files

Copyright (C) 2005-2009 Mark A Lindner

This file is part of libconfig.

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, see <http://www.gnu.org/licenses/>.

What's New, Release Notes, and Known Issues for 11

This chapter discusses important product details and describes how to access the list of new features that are included in the products that comprise ISE® Design Suite 11. It also describes how to access the Known Issues for ISE Design Suite 11. This chapter comprises the following sections:

- “What’s New”
- “Release Notes”
- “Known Issues”

What’s New

This section describes the different ways to access the What’s New documentation.

Microsoft Windows Only

You can view the What’s New documentation by selecting **Start > Programs > Xilinx ISE Design Suite 11 > Documentation > What’s New**.

Microsoft Windows and Linux

The What’s New documentation is contained in a file called `whatsnew.htm`, which is located in `\Xilinx\11.1\common`, where `\Xilinx\11.1` is the default directory.

Online

You can find the What’s New documentation online at:

www.xilinx.com/support/documentation/sw_manuals/xilinx11/whatsnew.htm

The DSP tools, AccelDSP™, and System Generator are included in ISE Design Suite 11. For more information on these specific products, see their respective What’s New files:

www.xilinx.com/ise/dsp_design_prod/acceldsp/acceldsp-new.htm

www.xilinx.com/products/software/sysgen/whatsnew.htm

Release Notes

This section describes important release information.

ISE Foundation Tools

A few ISE Foundation™ tools have been removed or have limited support. The following table lists these tools along with their current replacement or support level.

Table 2-1: Tools removed or with limited support

Tools	Alternative or Support Level
Floorplanner	Use PlanAhead
PACE	CPLD support only
ABEL Support	Use ISE Design Suite 10.1
StateCAD	Use ISE Design Suite 10.1
HDL Bencher	Use HDL Testbench Examples

DSP Tools

Further development of the AccelDSP synthesis tool has been discontinued. You may continue to use this version of the tool with ISE Design Suite 11. The tool will not be included in ISE Design Suite 12.

For additional release information specific to the DSP tools, AccelDSP Synthesis Tool and System Generator, see their respective Release Notes files:

www.xilinx.com/support/documentation/sw_manuals/acceldsp_rn.pdf

www.xilinx.com/support/documentation/sw_manuals/sysgen_gs.pdf

CORE Generator IP Notes

The first Intellectual Property (IP) Update for the ISE Design Suite 11 CORE Generator™ software, IP_11.1.0, is integrated into the initial ISE Design Suite 11 software release and is automatically installed with it.

Subsequent ISE 11-compatible updates are cumulative and will be advertised on the Xilinx Intellectual Property Center, <http://www.xilinx.com/ipcenter>, as they become available. These future updates will be downloadable from the [Xilinx Download Center](#), and will also usually require installation of specific ISE updates.

Some IP cores might also require license purchase or installation of a license key to activate full access. IP-specific requirements along these lines are documented on the product page for each core.

Embedded Tools

Base System Builder now supports the Xilinx SP601 and ML605 development boards.

Note: All Virtex®-6 and Spartan®-6 device support is Early Access

ModelSim Xilinx Edition III

For ModelSim Xilinx Edition III information see Appendix A, “Simulating Xilinx Designs in ModelSim” in the [Synthesis and Simulation Design Guide](#).

To Simulate Xilinx Designs in ModelSim, you must use the Compplib to compile the Xilinx® Simulation Libraries for the target simulator. For more information, see the [Command Line Tools User Guide](#).

PlanAhead

Updated Device Support, including the new Spartan-6 low power family. New Virtex-6 SSN Predictor tool for pin assignment.

Known Issues

Xilinx Answer Record #32147 contains information on Known Issues for ISE Design Suite 11:

<http://www.xilinx.com/support/answers/32147.htm>

Operating Systems, Architecture Support, and System Requirements

This chapter describes the operating systems and architectures that the ISE® Design Suite 11 software supports. It also describes system requirements for ISE Design Suite 11. This chapter comprises the following sections:

- “Operating Systems”
- “Architectures”
- “System Requirements”

Operating Systems

ISE Design Suite 11 supports three operating systems: Microsoft Windows®, Red Hat® Enterprise Linux, and SUSE Linux Enterprise.

Microsoft Windows

The following table lists Microsoft Windows support.

Table 3-1: Microsoft Windows Support (English and Japanese)

Product	XP Professional		Vista Business	
	32-bit	64-bit	32-bit	64-bit
Design Entry and Implementation Tools (ISE Foundation™)	Yes	Yes	Yes	Yes
ISE Simulator (ISim)	Yes	No	Yes	No
ISE WebPACK™	Yes	No	Yes	No
ChipScope™ Pro and ChipScope Pro Serial I/O Toolkit	Yes	Yes	Yes	Yes
Embedded Development Kit (EDK)	Yes	No	Yes	No
System Generator for DSP	Yes	No	Yes	No
AccelDSP™ Synthesis Tool	Yes	No	No	No
ModelSim Xilinx Edition-III (MXE-III)	Yes	No	Yes	No

Red Hat Enterprise Linux

The following table lists Red Hat Enterprise Linux support.

Table 3-2: Red Hat Enterprise Linux Support

Product	4 Workstation		5 Desktop	
	32-bit	64-bit	32-bit	64-bit
Design Entry and Implementation Tools (ISE Foundation)	Yes	Yes	Yes	Yes
ISE Simulator (ISim)	Yes	Yes	Yes	Yes
ISE WebPACK	Yes	No	Yes	No
ChipScope Pro and ChipScope Pro Serial I/O Toolkit	Yes	Yes	Yes	Yes
Embedded Development Kit (EDK)	Yes	Yes	Yes	Yes
System Generator for DSP	Yes	Yes	Yes	Yes
ModelSim Xilinx Edition-III (MXE-III)	No	No	No	No

SUSE Linux Enterprise

The following table lists SUSE Linux Enterprise 10 support.

Table 3-3: SUSE Linux Enterprise 10 Support (English and Japanese)

Product	32-bit	64-bit
Design Entry and Implementation Tools (ISE Foundation)	Yes	Yes
ISE Simulator (ISim)	Yes	Yes
ISE WebPACK	Yes	No
ChipScope Pro and ChipScope Pro Serial I/O Toolkit	Yes	Yes
Embedded Development Kit (EDK)	Yes	Yes
System Generator for DSP*	Yes	Yes
ModelSim Xilinx Edition-III (MXE-III)	No	No

* System Generator supports English only.

Architectures

ISE Design Suite 11 supports three architecture families: Virtex[®], Spartan[®], and CPLD. The following table lists the architecture support.

Note: ISE Design Suite 11.2 and 11.3 support two additional architecture families: Virtex-6 and Spartan-6. For details, see [Table 1-1, page 16](#).

Table 3-4: Architecture Support

	ISE WebPACK	ISE Design Suite (Logic Edition, Embedded Edition, DSP Edition, System Edition)
Virtex Series	Virtex-4: LX: XC4VLX15, XC4VLX25 SX: XC4VSX25 FX: XC4VFX12 Virtex-5: LX: XC5VLX30, XC5VLX50 LXT: XC5VLX20T, XC5VLX30T, XC5VLX50T FXT: XC5VFX30T	Virtex-4: LX: All SX: All FX: All Virtex-5: LX: All LXT: All SXT: All TXT: All FXT: All Note: Embedded Development Kit (EDK) does not support Virtex-5 TXT.
Spartan Series	Spartan-3: XC3S50 - XC3S1500 Spartan-3A: All Spartan-3AN: All Spartan-3A DSP: XC3SD1800A Spartan-3E: All Spartan-3L: XC3S1000L, XC3S1500L XA* Spartan-3: All XA* Spartan-3E: All XA* Spartan-3A: All XA* Spartan-3A DSP: XC3SD1800A *Xilinx Automotive	Spartan-3: All Spartan-3A: All Spartan-3AN: All Spartan-3A DSP: All Spartan-3E: All Spartan-3L: All XA* Spartan-3: All XA* Spartan-3E: All XA* Spartan-3A: All XA* Spartan-3A DSP: All *Xilinx Automotive
CoolRunner [™] XPLA3 CoolRunner-II XA* CoolRunner-II *Xilinx Automotive	All	All Note: Embedded Development Kit (EDK) does not support CPLDs.
XC9500 Series	All (Except 9500XV Family)	All (Except 9500XV Family) Note: Embedded Development Kit (EDK) does not support CPLDs

Device Obsolescence

The following devices are not supported in ISE Design Suite 11:

- Virtex
- Virtex-E
- Virtex-II
- Virtex-II Pro
- Spartan-II
- Spartan-III
- 9500XV

All families, except 9500XV, are still being manufactured with no plans to discontinue. ISE Design Suite 10.1 SP3 is available for download to support the discontinued devices.

System Requirements

This section provides information on supported operating systems, Web browser, cable installation, and system memory requirements.

ISE Design Suite

Cable Installation Requirements

Platform Cable USB II and Parallel Cable IV are high-performance cables that enable Xilinx® design tools to program and configure target hardware.

To install Platform Cable USB II, a system must have at least a USB 1.1 port. For maximum performance, Xilinx recommends using Platform Cable USB II with a USB 2.0 port.

To install Parallel Cable IV, a system must have a parallel port connector and support parallel port communication.

Cables are officially supported on the 32-bit and 64-bit versions of the following operating systems: Windows XP Professional, Windows Vista Business, Red Hat Linux Enterprise, and SUSE Linux Enterprise 10. Additional platform specific notes are as follows:

- All Linux: Root privileges are required to install cable drivers on Linux.
- SUSE Linux Enterprise 10: The fxload software package is required to ensure correct Platform Cable USB II operation. The fxload package is not automatically installed on SUSE Linux Enterprise 10 distributions, and must be installed by the user or System Administrator.
- Linux LibUSB support: Preliminary support for Platform Cable USB II based upon the LibUSB package is now available from the Xilinx website. See Answer Record #25249 for details.

For additional information regarding Xilinx cables, refer to the following documents:

- USB Cable Installation Guide (UG344)
- Platform Cable USB II Data Sheet (DS593)
- Parallel Cable IV Data Sheet (DS097)

System Memory Recommendations

This section gives the RAM and swap space needed to run ISE Design Suite 11 on your system.

While the memory recommendation table, available at the link below, lists the system recommendations for typical designs, the unique characteristics of each design affect the system resources required. Design complexity and constraints affect whether the design can be implemented using more or less memory. Each designer must monitor the system resources and adjust the systems resources, if necessary. For more information on memory recommendations, see:

<http://www.xilinx.com/ise/products/memory.htm>

Operating Systems and Available Memory

The Microsoft Windows and Linux® operating system (OS) architectures have limitations on the maximum memory available to a Xilinx program. Users targeting the largest devices and most complex designs may encounter this limitation. ISE Design Suite 11 has optimized memory and enabled software support for applications to increase RAM memory available to Xilinx software.

Windows XP Professional 32-bit

Xilinx applications are enabled to take advantage of the memory increase feature on Windows 32-bit. You must then modify Windows setting to get access to this larger memory.

The standard Windows OS architecture limits the maximum memory available to a Xilinx process to 2 Gigabyte (GB). In Windows XP Professional, Microsoft created an option to support the ability of an application to address 3 GB of RAM. Xilinx ISE applications have built-in support for this option. To take advantage of this capability, you must also modify your Windows XP OS to enable this feature, which requires that you modify your `boot.ini` file by adding a `"/3GB"` entry to the end of the `"startup"` line.

Before enabling 3 GB support for Xilinx applications, please read the Microsoft Knowledge Base Article #328269 at <http://support.microsoft.com/?kbid=328269>. If you upgrade your computer to Windows XP Service Pack 1 (SP1) and you are using the `/3GB` switch, Windows may not restart without a patch from Microsoft. Please see (Xilinx Answer 17905) for more information.

Additionally, before making this change, please read:

- Microsoft Bulletin Q17193 <http://support.microsoft.com/default.aspx?scid=kb;en-us;Q17193>, which contains information on "Application Use of 4GT RAM Tuning".
- Microsoft Bulletin Q289022 <http://support.microsoft.com/default.aspx?scid=kb;en-us;q289022>, contains instructions for editing your `boot.ini` file.

Linux

ISE Design Suite 11 supports both Linux 32-bit and Linux 64-bit. The latter allows greater memory allocation. Xilinx has documented Linux kernel modifications that allow a Xilinx application to address over 3 GB of memory.

For 32-bit Red Hat Enterprise Linux systems, the operating system can use the `hugemem` kernel to allocate 4 GB to each process. More information can be found on the Red Hat support site: <http://www.redhat.com/docs/manuals/enterprise/>

ISE supports the 64-bit version of Red Hat Enterprise Linux, which allows greater memory allocation out of the box.

Equipment and Permissions

The following table lists related equipment, permissions, and network connections.

Table 3-5: Equipment and Permissions Requirements

Item	Requirement
Directory permissions	Write permissions must exist for all directories containing design files to be edited.
Monitor	16-bit color VGA with a minimum recommended resolution of 1024 by 768 pixels.
Drive	You must have a DVD-ROM for ISE Design Suite (if you have received a DVD, rather than downloading from the web), and CD-ROM for MXE on your system.
Ports	To program devices, you must have an available parallel, or USB port appropriate for your Xilinx programming cable. Specifications for ports are listed in the documentation for your cable. Note: Installation of the cable driver software requires Windows XP Pro SP1 (or later), or Windows Vista Business. If you are not using one of these operating systems, the cables may not work properly.

Note: X Servers/ Remote Desktop Servers, such as Exceed, ReflectionX, and XWin32, are not supported.

Network Time Synchronization

When design files are located on a network machine, other than the machine with the installed software, the clock settings of both machines must be set the same. These times must be synchronized on a regular basis for continued proper functioning of the software.

ChipScope Pro and ChipScope Pro Serial I/O Toolkit

Cable Installation Requirements

For Linux, cable drivers require root privileges to install. To install Platform Cable USB II for USB 2.0 port, you must have Windows XP SP2. The Platform Cable USB II is a high-performance download cable that attaches to user hardware for use with the ChipScope Pro Analyzer tool for device programming, configuring, and debugging.

System Memory Recommendations

The ChipScope Pro Analyzer requires 1024 megabytes (MB) of system memory. The ChipScope Pro Core Inserter tool has the same requirements as ISE. For more information on ISE memory recommendations, see:

<http://www.xilinx.com/ise/products/memory.htm>.

DSP Tools System Requirements and Recommendations

Hardware Recommendations

Table 3-6: AccelDSP and System Generator for DSP Hardware Recommendations

Recommendation	Notes
2.00 GB of RAM	
600 MB of hard disk space	Minimum Requirement
Xilinx Hardware Co-Simulation Platform	Required for the Hardware Co-Simulation Flow

OS and Software Requirements

Table 3-7: AccelDSP Synthesis Tool OS and Software Requirements

Requirement	Notes
Windows XP SP2, 32-bit	The AccelDSP synthesis tool does not support Windows Terminal Services.
Xilinx ISE Design Suite 11	
MathWorks MATLAB® Version 2008a or 2008b	
MathWorks Simulink® with Fixed-Point Toolbox Version 2008a or 2008b	Required for the System Generator Flow

Table 3-8: System Generator for DSP OS and Software Requirements

Requirement	Notes
Windows XP SP2, 32-bit (English only) or Red Hat Linux 4u7, 32-bit & 64-bit	
Xilinx ISE Design Suite 11	
MathWorks MATLAB Version 2008a or 2008b	
MathWorks Simulink with Fixed-Point Toolbox Version 2008a or 2008b	MATLAB must be installed in a directory with no spaces (e.g., C:\MATLAB\R2008b) Fixed-Point Toolbox required for signals greater than 53 bits

Download and Installation (11.1)

This chapter describes how to download and install ISE® Design Suite 11 software, as well as ModelSim Xilinx® Edition 6.4b. It includes the following sections:

- [“Downloading ISE Design Suite 11”](#)
- [“Installing ISE Design Suite 11 - Overview for All Platforms”](#)
- [“Platform Specific Instructions”](#)
- [“Installation Flow”](#)
- [“USB FLEXid Dongle Driver Installation”](#)
- [“Network Installations”](#)
- [“Obtaining Software Updates”](#)
- [“Uninstalling ISE Design Suite 11”](#)
- [“Installing ModelSim Xilinx Edition 6.4b Software \(Windows Only\) - Optional”](#)

Downloading ISE Design Suite 11

This section explains how to download the ISE Design Suite 11 software. All files will be downloaded using the Akamai download manager.

For the optimum download experience:

- ◆ Allow pop-ups from entitlenow.com
- ◆ Set security settings to allow for secure and non-secure items to be displayed on the same page
- ◆ Allow the Akamai download manager to run Java processes

Software updates for all platforms are regularly made available on the Download Center at:

<http://www.xilinx.com/support/download/index.htm>

From this page, perform the following:

1. Click the **Login to start downloading** link.
2. Enter your User ID and Password to log into your Xilinx account.
Note: If you do not have a Xilinx account, you will need to create one in order to download products.
An address verification screen will appear.
3. Once the current address is correct, click **Next**.

Install Over the Web (Unavailable after 12.1 begins shipping)

Installing over the web requires the download, installation, and execution of a Xilinx Web Install Client. This Web Install Client offers a single step installation procedure in which only the software components you select are downloaded and installed. This selection may save considerable time and bandwidth, depending on your installation needs.

To install over the web:

1. Click **Download Web Install Client**.
A compressed ZIP format file containing the Web Install Client will be downloaded to your computer.
2. Extract the contents of the file to your hard drive.
3. Run **xsetup.exe** (Windows) or **xsetup** (Linux).
Follow the instructions in the [“Installing ISE Design Suite 11 - Overview for All Platforms”](#) section below.

Download Individual Files

The Download Individual Files option is useful if you would prefer to download installation files for future use. You can download a version of the full DVD image or versions of individual product-specific installers. These files are packaged using TAR methods. You will need to use software from a third party provider to unpack them. Consult your IT department for assistance. Commonly used tools for TAR files are 7-ZIP, GNU built-in tools, WinZIP, and WinRAR, and these are licensed solely by each respective developer and not Xilinx. Xilinx hereby disclaims any warranties, express or implied, including warranties of merchantability, fitness for a particular purpose, or noninfringement with respect to these suggested software tools.

Installing ISE Design Suite 11 - Overview for All Platforms

This section explains the installation process for all platforms for ISE Design Suite 11. Installation for each platform should be preceded by these steps:

1. Ensure that you have appropriate privileges on the system that the software will be installed on. Some components, such as programming cable device drivers, require administrator-level permissions.
2. Close all programs before you begin installation.
3. Ensure that your system meets the requirements described in [Chapter 3, “Operating Systems, Architecture Support, and System Requirements.”](#)
4. Check the links found in [Chapter 2, “What’s New, Release Notes, and Known Issues for 11”](#) for any installation issues that pertain to your system or configuration.
5. Ensure if EDK is installed, the installation has to be in a directory structure that does not contain spaces.

After installation, if it has not already been done by the installer, manually set your XILINX Environment Variable before using the ISE Design Suite 11 software. For more information, see [“Platform Specific Instructions.”](#)

Platform Specific Instructions

This section provides platform-specific details of the ISE Design Suite 11 installation.

Microsoft Windows

This section describes how to start the installation for Microsoft Windows operating systems.

To Start Installation

The method of starting the installation depends on how you have obtained the installation program. See “[Downloading ISE Design Suite 11](#)” for details on your options.

- If you have downloaded either the WebInstall Client, or have used the “Download Files Individually” option for a particular product, decompress that file and run the **xsetup.exe** program contained therein.
- If you have ordered and received an ISE Design Suite DVD, load the DVD. If you have the auto-run feature of your DVD drive enabled, the setup program should start automatically. If it does not, browse to the DVD in Windows Explorer and run the **xsetup.exe** found at the root of the disc.

Linux

This section describes how to start the installation and set the environment variables for Linux operating systems.

To Start Installation

The method of starting the installation depends on how you have obtained the installation program. See “[Downloading ISE Design Suite 11](#)” for details on your options.

- If you have downloaded either the WebInstall Client, or have used the “Download Files Individually” option for a particular product, decompress that file and run the **xsetup** program contained therein.
- If you have ordered and received an ISE Design Suite DVD, load the DVD. Click the setup file in your file manager, or browse to the root of your DVD drive and type **./xsetup**.

To Set Environment Variables

At the completion of the installation process, the installation program creates an environment variables file for you.

1. Go to your XILINX installation directory.
2. Type either **source settings32.(c)sh** or **source settings64.(c)sh**, whichever is appropriate to your shell.

To set your environment variables manually or from within your setup script, it is recommended that you copy the settings from the appropriate file for your operating system, as listed above. Xilinx environment variables settings are specific to each operating system platform.

Installation Flow

The following section describes important screens that you will encounter during the installation process.

Note: For each of the following installation steps, click on the text of any item that has a checkbox next to it to obtain more information. Information is displayed in the “Description of Highlighted Item Above” area near the bottom of the screen.

Accept Software Licenses

There are two Accept Software License Agreement Screens you will have to click through. To proceed:

1. Click the **I accept the terms of this software agreement** checkbox.
2. Click **Next** on each screen.

Selecting Xilinx Products

The following figure shows the screen that allows you to select the Xilinx products you wish to install. Products are grouped inside categories and the default category selected is called ISE Design Suite Product. Leaving all products in this category checked will install the entire ISE Design Suite.

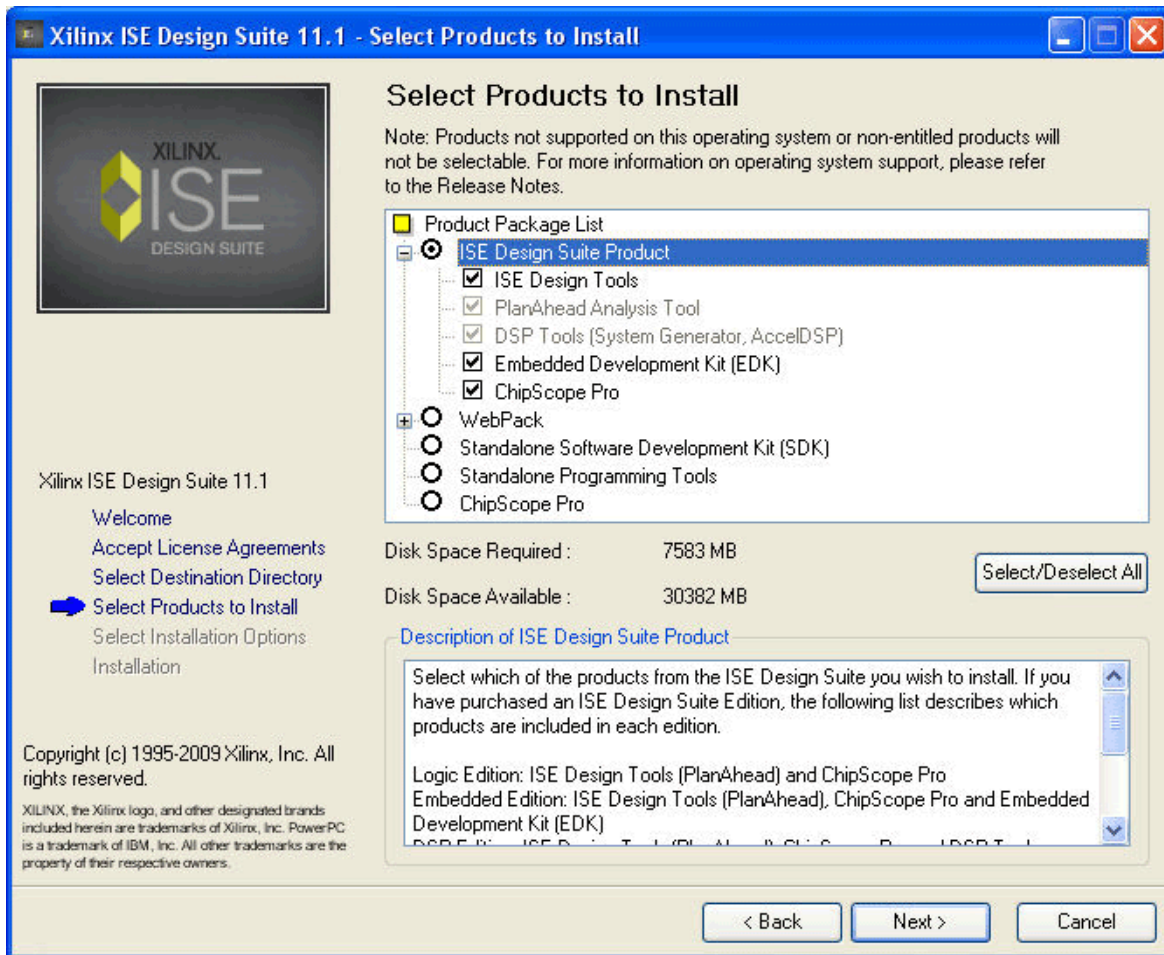


Figure 4-1: ISE Design Suite 11 Installation - Select Xilinx Products Screen

Note: PlanAhead™ analysis tool and DSP tools are checked by default when ISE Design Tools are checked. This is due to a dependency that the ISE Design Tools have upon these other products. To install PlanAhead only, uncheck ISE Design Tools, and PlanAhead will become individually selectable.

Select Destination Directory

In the Select Destination Directory screen, select the directory in which to install the software, and enter a name for the Program Folders list. By default, the directory is set to C:\Xilinx\11 and the Program Folders Name is listed as Xilinx ISE Design Suite.

Select Installation Options

There are three Select Installation Options screens which allow you to select Xilinx modules and devices, set environment variables, and choose additional install options.

Selecting Xilinx Modules and Devices

The following figure shows the screen from the Installation Software that enables you to select Xilinx products, modules, and device families you wish to install.

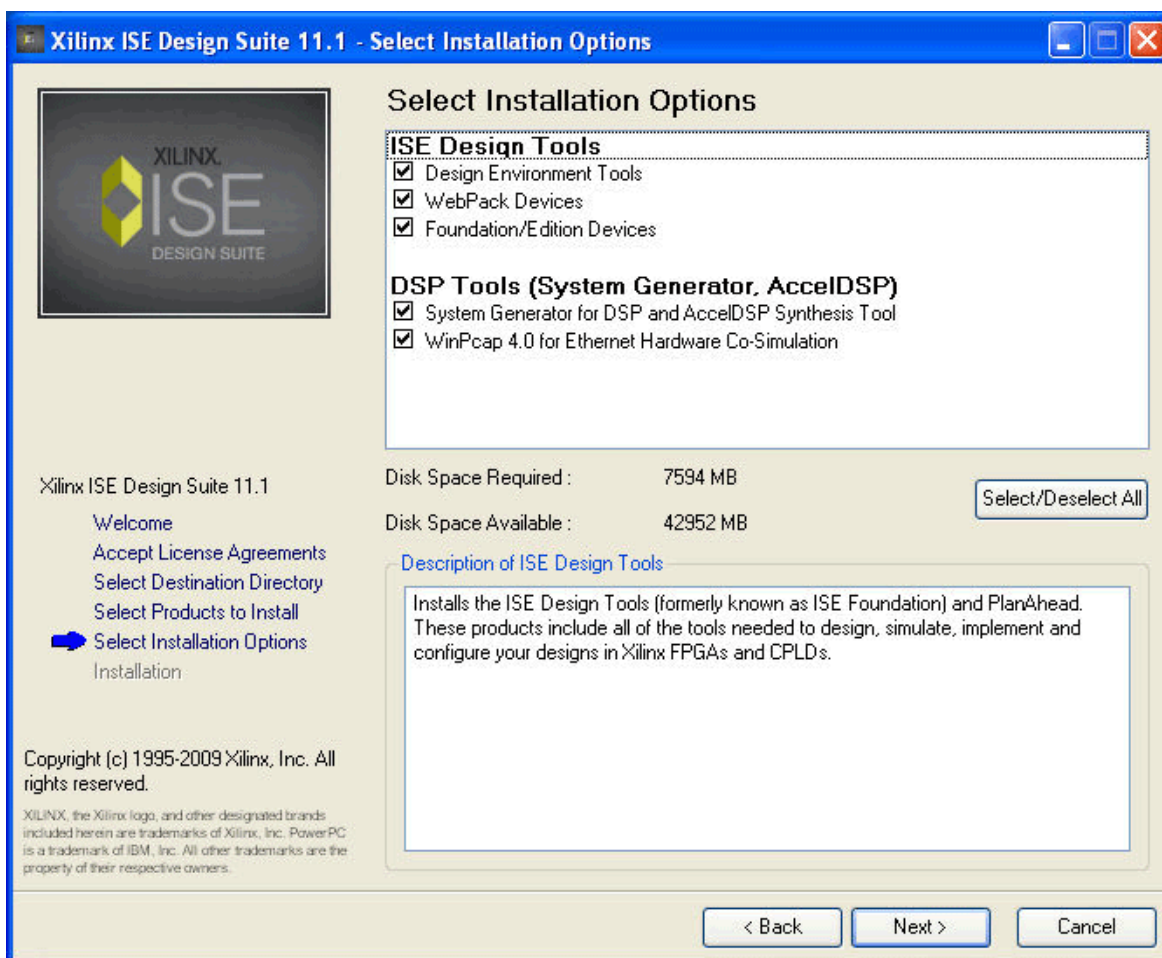


Figure 4-2: ISE Design Suite 11 Installation - Xilinx Modules and Devices

Set Environment Variables

The installer provides an option to set the environment variables required by each Xilinx Design Suite product to appropriate values. The following figure shows the Select Installation option screen in which environment variables are set.

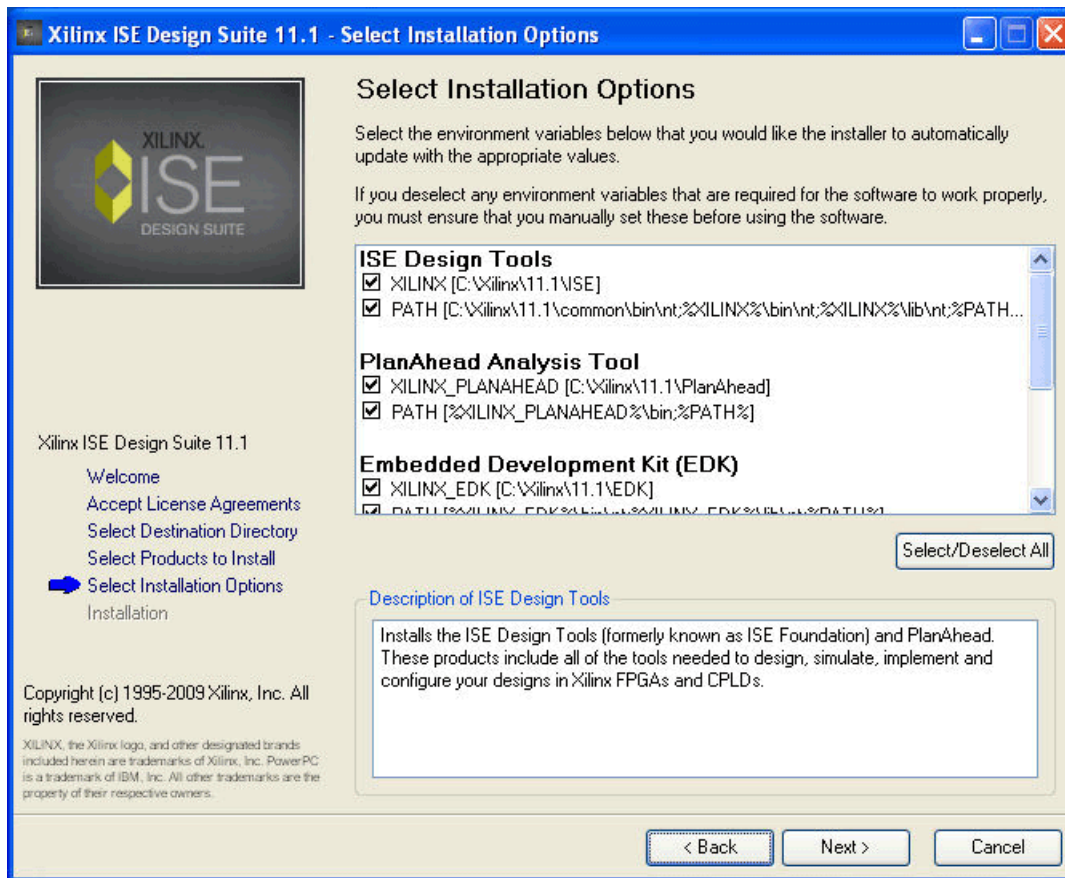


Figure 4-3: ISE Design Suite 11 Installation - Select Environment Variables Screen

Selecting Additional Options

Additional options can be selected from this screen. The following figure shows an example of how this screen will look.

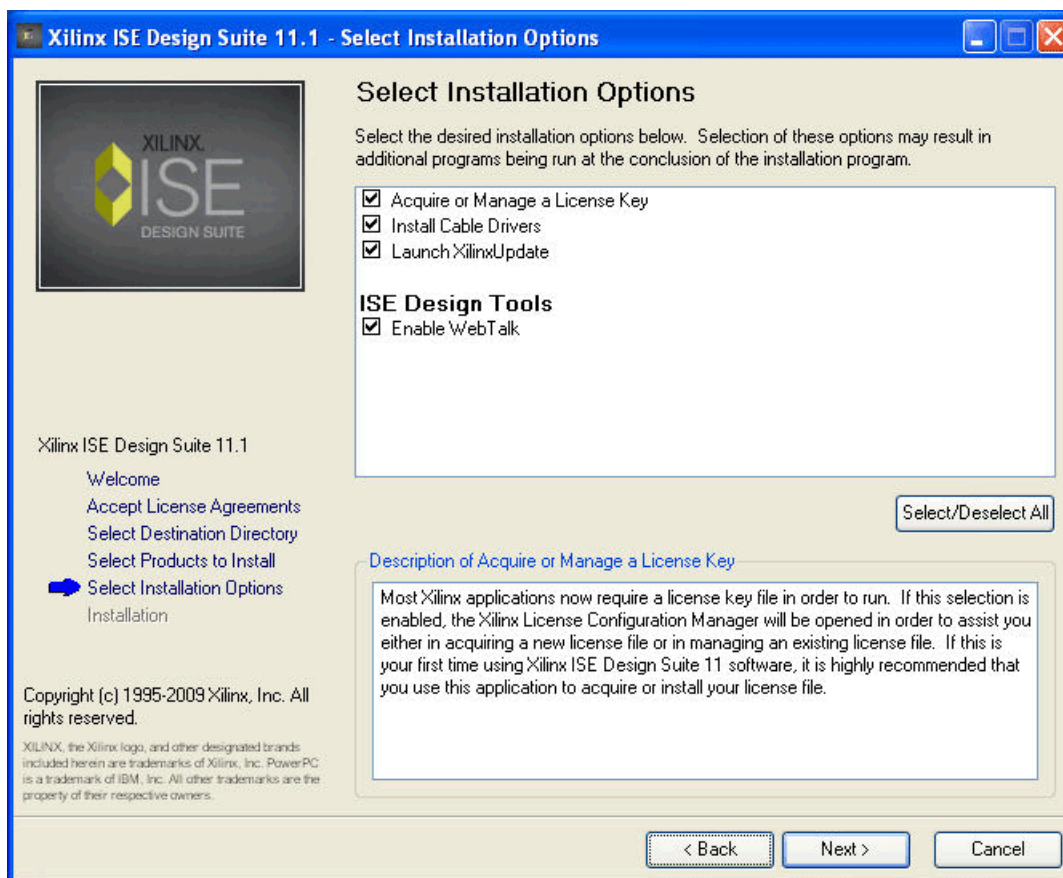


Figure 4-4: ISE Design Suite 11 Installation - Select Installation Options Screen

Begin Installation

The Begin Installation Screen gives you a summary of the tools, products, and options to be installed. If you want to change anything, select the **Back** button and make the desired changes. To begin the installation, click **Install**.

Towards the end of the installation process, the Xilinx License Configuration Manager will open by default. Follow the instructions in the Manager to obtain or locate a license file.

Following licensing, XilinxUpdate will open to enable you to install any updates that are currently available.

USB FLEXid Dongle Driver Installation

If you have purchased a USB FLEX ID Dongle for use with Windows operating systems, you will need to install the appropriate driver prior to creating a FLEXnet license for use with it.

1. Install Xilinx ISE Design Suite 11.1 software first. This will contain the installer for the USB FLEXid dongle driver.
2. Run **FLEXid_Dongle_Driver_Installer.exe** found in <Xilinx Installation Directory>\11.1\ISE\bin\nt.
3. On the Select Options screen, ensure that only **FLEXid 9 Drivers** is checked.

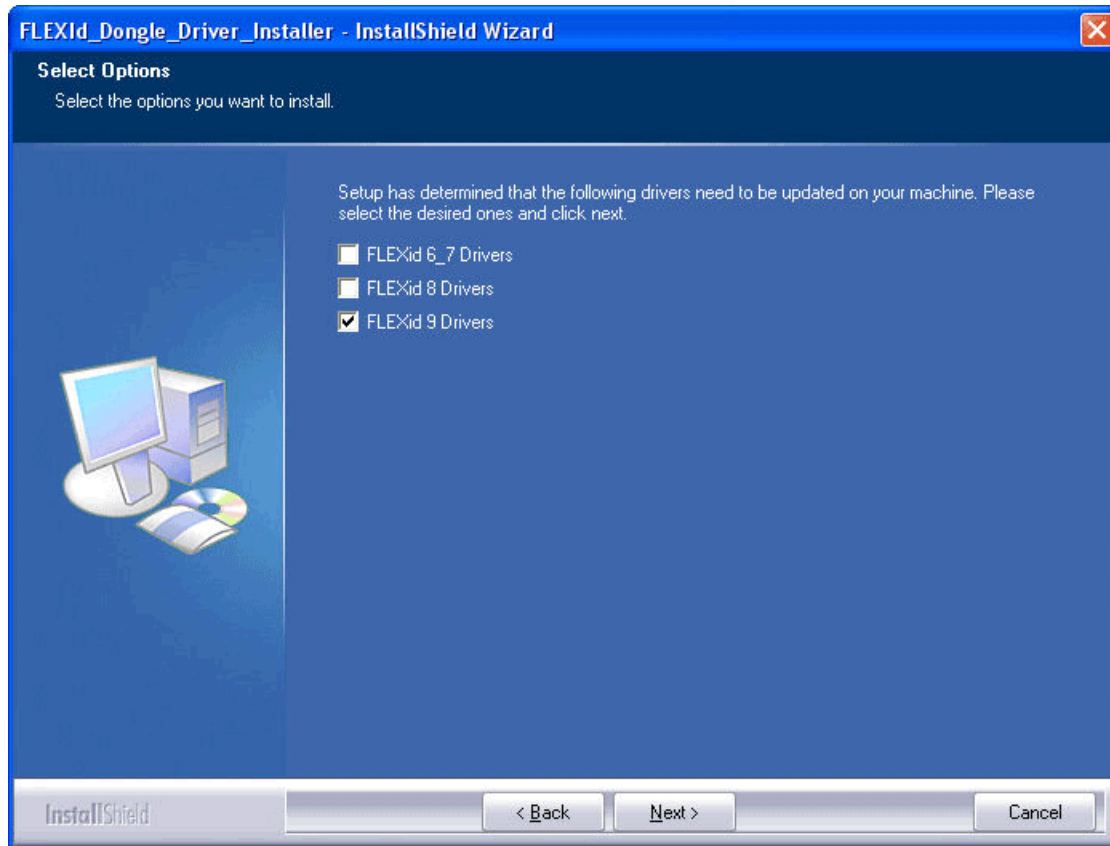


Figure 4-5: Select Options screen

4. Click **Next** twice, and the driver will install.

After installation, a screen will appear asking you if you wish to reboot. You will need to reboot to ensure that the dongle operates correctly.

Network Installations

Installing software to a network location provides a way for client machines to access the software by pointing to it on the network drive. To run the software on the network, the client machines must be set up correctly to ensure that the environment variables, registry, and program groups all point to the network. The following sections describe the procedure for network setups.

UNIX Clients

Each software user must source **settings32.(c)sh** or **settings64.(c)sh** (whichever is appropriate for your OS) from the \$XILINX area where the software is installed. This points the Xilinx environment variable, path, and LD_LIBRARY_PATH to the installed location.

To run the software applications from a remotely installed location, run an X Windows display manager, and include a DISPLAY environment variable. Define DISPLAY as the name of your display. DISPLAY is typically unix:0.0. For example, the following syntax allows you to run the software on the host named bigben and to display the graphics on the local monitor of the machine called mynode:

```
setenv DISPLAY mynode:0.0
xhost = bigbenPC Clients
```

Microsoft Windows Clients

1. Install the ISE software tools to a PC network server. Make sure that your users know the location of the software tools and have access to the installation directory, and that they have Administrator privileges for the following steps.
2. From the local client machine, browse to the following directory:
`network_install_location\common\bin\nt` and run the program **remotexsetup.bat**.
Running this program sets up the environment and registry settings needed to run the Xilinx tools from the remote location.
3. From the client machine, launch the ISE tools via the Program Group or Desktop shortcuts, or by running the applications on the network drive.

Installing to a Mounted Network Drive

Xilinx software is designed to be installed in a directory under ROOT (typically C:\Xilinx). The installer presents this option normally when installing to a local driver, but when installing to a mounted network drive, a subdirectory might not be defined and it appears to the Installer as if it is installing to a ROOT directory.

To work around this issue, define your target installation directory as "\Xilinx" under the network mount point (For example: "N:\Xilinx").

EDK Windows Environment Variables and Registry Settings

The EDK installer creates or modifies the following variables on your machine. These variables are added to the system settings.

- ◆ XILINX_EDK

Sets the value of this variable to the EDK installation directory.

- ◆ PATH

Prefixes the PATH environment variable with

```
%XILINX_EDK%\bin\nt;%XILINX_EDK%\lib\nt;%XILINX_EDK%\bin\nt;%XILINX_EDK%\bin\nt
```

EDK tools require the Cygwin tools distributed by Red Hat. A copy of these tools is distributed with the EDK installation. When you run XPS, the SDK IDE, or Xilinx Shell, your registry is checked for the entry:

```
My Computer\HKEY_CURRENT_USER\SOFTWARE\Cygnus Solutions\Cygwin.
```

If a compatible version of Cygwin is found pre-installed on your machine, the EDK tools use it. Otherwise, the registry is set up to point to the Cygwin tools distributed in the EDK installation area.

When you install EDK, Cygwin installation files are copied to your system. Whether or not the copied files are installed depends on the state of existing Cygwin installations on the machine. If you have Cygwin installed already, and if the existing Cygwin installation meets requirements, EDK does not install Cygwin (and the existing Cygwin installation is used). Otherwise, EDK installs Cygwin from the installation area. For more information, refer to the “EDK Shell” Chapter in the *Embedded System Tools Reference Manual*, available at:

http://www.xilinx.com/support/documentation/dt_edk_edk11-1.htm

Linux EDK Environment Variables

EDK installer creates `settings.csh` and `settings.sh` files in the EDK installation directory. These files set up the environment for using the EDK tools.

- ◆ `$XILINX_EDK`
Sets the value of this variable to the installation directory.
- ◆ `$PATH`
Prefixes the `$PATH` environment variable with:
 - `$XILINX_EDK/gnu/microblaze/lin/bin`
 - `$XILINX_EDK/gnu/powerpc-eabi/lin/bin/`
- ◆ `$LD_LIBRARY_PATH`
Prefixes the `$LD_LIBRARY` environment variable with `$XILINX_EDK/bin/lin`.

Note: While executing the script, make sure that the `$XILINX_EDK/bin/lin` appears before `$XILINX/bin/lin` in the `$LD_LIBRARY_PATH` variable.

Obtaining Software Updates

The following sections describe the ways to obtain software updates through XilinxUpdate and the Download Center.

XilinxUpdate

The XilinxUpdate tool is the preferred method of obtaining software updates. It provides the following features:

- Compares the latest version of software updates available on <http://www.xilinx.com/support> with what you have installed, and notifies you if a newer version is available.
- Downloads and installs the update in one step.
- Downloads only the files necessary to update your installation.

By default, XilinxUpdate automatically runs at the conclusion of the ISE Design Suite 11 installation process. In addition, it can run after installation in any of the following ways:

- Automatic periodic checks at Project Navigator startup time.
- Select **Help > XilinxUpdate** from Project Navigator.
- Select **Start > Programs > Xilinx ISE Design Suite 11 > ISE > Accessories > XilinxUpdate**.

Note: If you unchecked the option of running XilinxUpdate during the initial software installation, it is strongly recommended that you run it as soon as is practical in order to ensure that you have the latest updates and enhancements.

Note: The **Edit > Preferences** menu selection in Project Navigator allows you to control the frequency of the automatic checks that happen at Project Navigator startup time

XilinxUpdate Network Installations

By default, the **Automatically check for software updates** option at Project Navigator startup is enabled on the machine used to install the ISE software to the network location. All clients pointing to this network location have this option disabled by default. Client users have the option of enabling this option (**Edit > Preferences > XilinxUpdate** from Project Navigator) and also running manual checks.

Note: To perform a software update installation, you must have write permissions for the \$XILINX installation directory.

Download Center

Software updates for all platforms are regularly made available on the Download Center at:

<http://www.xilinx.com/support/download/index.htm>

Uninstalling ISE Design Suite 11

Microsoft Windows

The following sections describe how to uninstall the products that comprise ISE Design Suite on Microsoft Windows

To uninstall any Xilinx product, select the Uninstall item from that product's Start Menu folder. For instance, to uninstall ISE, select **Start > Programs > Xilinx Tools > Xilinx ISE Design Suite 11 > Accessories > Uninstall Xilinx ISE Design Suite**.

Alternatively, you can use the appropriate uninstall entry in the Add or Remove Programs dialog box, accessed via the Windows Control Panel. Possible entries include:

- Xilinx ChipScope™ Pro 11
- Xilinx DSP Tools (System Generator, AccelDSP™) 11
- Xilinx EDK 11
- Xilinx ISE 11
- Xilinx PlanAhead 11

Depending on what you have installed, some ancillary applications may also need to be uninstalled, such as WinPcap 4.0 (optional component of DSP Tools).

Linux

To uninstall a Xilinx Design Suite product, you need to remove the appropriate product directory that is found in the Design Suite root directory. Type in `./xsetup -uninstall` in the shell.

Before uninstalling, be sure you have moved any project files that you want to keep outside your Xilinx installation directory structure, or they will be deleted.

Installing ModelSim Xilinx Edition 6.4b Software (Windows Only) - Optional

If you have already purchased ModelSim Xilinx Edition (MXE) 6.4b, you will receive a license file after registering the MXE software after installation. For complete product and purchasing information for MXE, contact your local Xilinx representative or visit the ModelSim Xilinx Edition website:

http://www.xilinx.com/ise/optional_prod/mxe.htm

To install MXE software, perform the following steps:

1. Insert the ModelSim Xilinx Edition CD.
2. If the CD does not automatically run, select **Start > Run > D:\setup.exe**.
3. Follow the instructions to complete the installation.
4. Follow the instructions provided to complete a license request.
A license file will be e-mailed to you.
5. Put the license in a location pointed to by the LM_LICENSE_FILE variable as follows:

```
set LM_LICENSE_FILE=<path_to_license>\license.dat
```

You can also cut and paste the contents into your existing `license.dat` file.

Note: MXE is not a supported simulator for Xilinx Platform Studio.

Obtaining and Managing a License

The Xilinx® Product Download and Licensing Site is an online service for downloading, licensing, and administering evaluation, and full copies of Xilinx software and IP products. This chapter describes the FLEXnet license generation functionality of the Product Download and Licensing Site. It includes the following sections:


- [“Accessing the Product Download and Licensing Site”](#)
- [“Product Licensing Accounts”](#)
- [“User Types and Actions”](#)
- [“Creating a License Key File”](#)
- [“Managing License Key Files”](#)
- [“Managing User Access to Product Licensing Account”](#)
- [“Installing Your License Key File”](#)

Accessing the Product Download and Licensing Site

The Product Download and Licensing Site is accessible in various ways depending upon the type of license being generated.

- If you purchased products, follow the link included in your order confirmation email. It will provide direct access to an account containing your product entitlements.
- If you want to evaluate ISE® Design Suite 11 products, go to www.xilinx.com/ise_eval.
- If you want to evaluate IP products, go to www.xilinx.com/ipcenter and follow the “Evaluate” link on the IP product page of interest.
- You may also access the Product Download and Licensing Site directly by going to www.xilinx.com/getproduct. You will need to register or enter your registration information first.

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Figure 5-1: Xilinx Sign In Page

You must first sign in. If you already have a Xilinx user account, enter your user ID and password, and then validate that your contact information is current. If you do not have an account, click the **Create Account** button.

Product Licensing Accounts

When you purchase a software or IP product from Xilinx, you are purchasing a license to use and receive updates for that product for one year. The license to use Xilinx software and IP products is managed through the use of product entitlements. A product entitlement is the determination of:

- Which product was purchased
- The number of seats purchased
- The license type (floating or node-locked)
- The product subscription period (product updates are provided throughout the year)

In addition to managing the product entitlements for your purchased software tools and IP, you can also access product entitlements for “No Charge” or “Evaluation” products. Full and No Charge licenses have a subscription period of one year. Software tools evaluations are for 30 days, and IP evaluations are for 120 days.

Activating a product entitlement results in one or more license keys being generated by the website. When installed, the license keys enable the use of the software and IP that was

purchased or is being evaluated. Your product entitlements and resulting license key files are managed in a product licensing account on the Xilinx website.

Product licensing accounts are specific to the individual listed on the Xilinx Software Purchase Order, which is either the end-user or administrator of the software. All purchases made can be managed in the same product licensing account if a single administrator is named, or a company site can have multiple accounts managed by different administrators. The latter is helpful if a site has multiple design teams working on differing projects with different budget pools.

Note: A license key can be generated for a product entitlement that has expired; however, it will only enable product releases up to the subscription end date. Applying a product update that was made available after the subscription end date of your license will result in an error.

LogiCORE IP License Generation In ISE Design Suite 11

Beginning in ISE Design Suite 11, LogiCORE™ IP licenses are no longer generated through lounges on the Xilinx website. Instead, the entitlement process for LogiCORE IP has been automated and will use the same electronic entitlement process used for other software. When a purchase order for LogiCORE IP is entered into the Xilinx system, it will be processed in less than 2 hours, following which you can generate LogiCORE IP licenses on the Product Download and Licensing Site, as described in this section.

Any IP and software entitlements you have purchased will appear in your list of entitled products when you log into the Product Download and Licensing Site. Licenses for Evaluation and No Charge IP will also be available on the site in a separate area. Licenses for all your software and IP can now be generated in one pass and are emailed to you in a single license file. In addition, IP core FLEXnet licenses now feature more licensing options, such as single or Triple-Redundant Floating Server support, and more host options for node-locked license keys: Ethernet MAC address, Hard-Drive Serial Number or USB Dongle ID.

User Types and Actions

There are three user types for the Product Download and Licensing Site: customer account administrator, end user, and evaluation user.

Customer Account Administrator

An example of a typical customer account administrator is a CAD tools manager. Every product licensing account *must* have at least one customer account administrator. A customer account administrator can manage more than one product licensing account.

The responsibilities as the customer account administrator include:

- Generating node-locked or floating licenses for Xilinx software and IP products.
- Adding and removing users from the product licensing account (as desired).
- Assigning administrative privileges to other users (as desired).
- Ordering product DVDs (if applicable).

The original customer account administrator is the “Ship To” contact that is identified during the product ordering process. That person will receive an email with instructions on how to download and license each of the products that were purchased. It is important that the customer account administrator follow the link in the email, as it will ensure that he can obtain access to the purchased products.

End User

Adding end users to a product licensing account allows an engineer or design team member the flexibility to manage and generate license keys on their own. The end user may generate license keys for node-locked products entitlements within the account. An end user is also allowed to generate license keys for evaluation software and evaluation of no charge IP products. Some restrictions are placed on the role of end user.

- An end user is not able to generate floating license keys. Only customer account administrators can generate server based (floating) license keys. Product entitlements for floating licenses are not viewable by end users in an account.
- An end user is not able to view the license keys generated by other users.
- An end user is not able to add or remove other users to or from the product licensing account.

Evaluation User

An evaluation user is someone who would like to test-drive ISE Design Suite 11 products. Evaluation users can:

- Generate a 30-day free evaluation license key for ISE Design Suite 11: System Edition
- Generate license keys for evaluation and no charge IP products
- Request an ISE Design Suite 11 DVD. Evaluation users must pay for the shipping of DVDs.

Note: A customer who is already licensed for a full version of an ISE Design Suite product edition can test-drive other ISE Design Suite product editions or IP. These product entitlements are made available in the same product licensing account.

All user types can download products electronically and request an ISE Design Suite 11 DVD.

Creating a License Key File

The Create License tab on the Product Download and Licensing Site is the starting point for license key file generation. The software tool and IP product entitlements you have purchased or wish to evaluate are presented in the product entitlement table.

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Home : Support : Product Download and Licensing

Product Download and Licensing

Looking to register 10.1 or earlier software products?

Account: Xilinx Test Account - 10101 Help

Download Software | **Create New Licenses** | Manage Licenses | Manage Users

Create a New License File for Account: Xilinx Test Account

Create a new license file by making your product selections from the table below. Floating and Node-Locked licenses cannot be combined in the same license file.

Add Evaluation and No Charge IP Cores to Product Table						
	Product	Type	License	Available Seats	Status	Subscription End Date
<input type="checkbox"/>	ISE Design Suite: System Edition	Evaluation	Node	1/1	Current	30 days
<input checked="" type="checkbox"/>	ChipscopePro Standalone Including Serial IO Toolkit	Full	Floating	50/50	Current	30 MAR 2010
<input type="checkbox"/>	ChipscopePro with Serial IO Toolkit, Transitional License	Full	Node / Floating	50/50	Current	30 MAR 2010
<input checked="" type="checkbox"/>	ISE Design Suite: System Edition	Full	Floating	50/50	Current	30 MAR 2010
<input type="checkbox"/>	LogiCORE, 10 Gigabit Ethernet MAC	Full	Node / Floating	Site	Current	30 MAR 2010
<input type="checkbox"/>	LogiCORE, 32-bit and 64-bit Initiator/Target for PCI	Full	Node / Floating	Site	Current	30 MAR 2010

Generate Floating License | Generate Node-Locked License

What is the difference between a floating and a node license?

Jobs | Events | Webcasts | News | Investors | Feedback | Sitemap | Legal | Privacy | Trademarks

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Figure 5-2: Create New License

Selecting Products

Begin the license generation process for products you have purchased or wish to evaluate by performing the following actions:

1. Select the product licensing account you wish to administer.
2. From the Account drop-down list, select your desired account.

Note: This selection will not be available if you are only entitled to evaluation or free products.

3. Make your product selections from the product entitlement table.

The type of product entitlements available are Full (purchased), No Charge, or Evaluation. Full and No Charge licenses have a subscription period of 1 year. Software tools evaluation is for 30 days, and IP evaluations are for 120 days.

Floating and node-locked licenses cannot be combined in the same license key file, and the interface is designed to prevent this.

Note: A floating license resides on a network server and enables applications to check out a license when they are invoked. At any one time, the number of licenses for simultaneous users is restricted to that of the license seats purchased. A node-locked license allows for the use of a single seat of a product entitlement on a specific machine.

For software tools, available seats represents the number of seats available for licensing over the total number of seats purchased. For IP, seats are managed according to the terms of the site wide license agreement.

Products with a status of “Current” are within their warranty period. Products with a status of “Expired” have a warranty period end date that has passed. If seats are available, licenses can be generated for either “Current” or “Expired” product entitlements.

The ISE Design Suite: System Edition evaluation product entitlement provides access to all the capabilities in the ISE Design Suite tool set. This product entitlement is automatically included in your product licensing account.

Evaluation and No Charge IP can be added to the list of product entitlements by clicking the **Add Evaluation and No Charge IP Cores** button. This brings up an IP product finder tool pictured below.

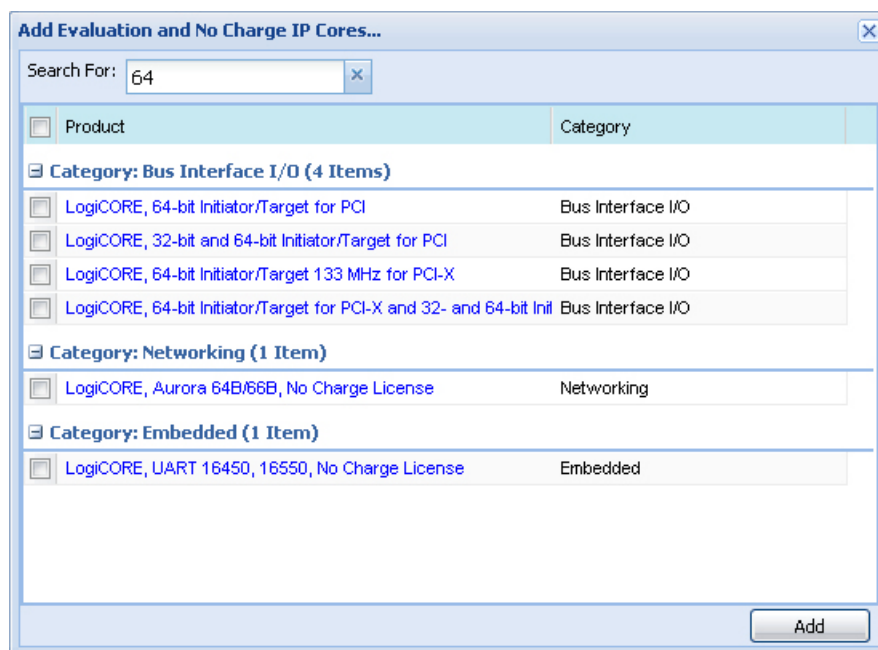


Figure 5-3: IP Product Selector

Note: ISE Design Suite 10.1 users who have software tools contracts that have not yet expired will have the choice to generate node-locked or floating licenses for their products that remain in warranty. These are referred to as “transitional licenses”.

Note: IP products are typically sold as site licenses providing the administrator the ability to generate license keys for floating and node-locked license types.

Note: End users will only see product entitlements for node-locked products. The customer account administrator will see product entitlements for both node-locked and floating products.

Generating a License

Click the **Generate License** button that corresponds to the type of license key file you are generating (floating or node-locked). The license generation form shown below appears.

Generate Floating License
Fields marked with an asterisk * are required.

1 PRODUCT SELECTION

Product Selections *	Product	Type	Available Seats	Subscription End Date	Requested Seats
<input checked="" type="checkbox"/>	ChipscopePro Standalone Including Serial	Full	50/50	30 MAR 2010	<input type="text" value="50"/>
<input checked="" type="checkbox"/>	ISE Design Suite: System Edition	Full	50/50	30 MAR 2010	<input type="text" value="50"/>

2 SYSTEM INFORMATION

License: Floating

Redundant Server: No Yes

Host ID:

3 COMMENTS

Comments:

Figure 5-4: Generate Floating License

Complete the form as follows:

1. Select the number of seats required for each product license.

This is for floating licenses only. All node-locked licenses are for one seat. The number of seats available for a product entitlement is automatically maintained by the system.

The "Requested Seats" field is populated, by default, with the full number of seats remaining on the product entitlement. A product is removed from the product entitlement table if all seats have been activated.

2. Enter system information.

System information is pre-populated in the option menu if you arrived at the Product Download and Licensing Site from a link within the Xilinx License Configuration Manager (XLCM).

A redundant server configuration provides a fail over for the license manager software. As long as two of the three servers are running, the license manager can continue to run.

If you do not have pre-populated system information or wish to add a different host, select the **Add a host** option from the option menu.

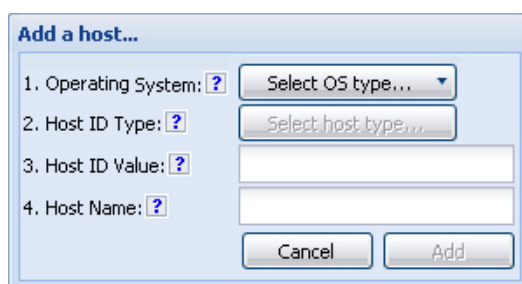


Figure 5-5: Add a Host

The host ID is a value that uniquely identifies the machine to which your software tools or IP is licensed. You may choose a host ID type to be a MAC address, a hard drive serial number, a dongle ID, or a Solaris host ID.

Note: Not all host ID types are supported for all operating systems. The easiest way to obtain your host ID is to run the XLCM on the machine that will serve as the license host.

3. Enter a comment.

Adding a comment to the license key file makes it easy for an administrator to keep notes on how software and IP product entitlements are allocated among users.

4. Click **Next**.

The Review License Request form appears.

Generate Floating License

4 REVIEW LICENSE REQUEST

Product Selections

Product	Subscription End Date	Available Seats	Requested Seats
ChipscopePro Standalone Including Serial IO Toolkit	2010-03-30	50/50	50
ISE Design Suite: System Edition	2010-03-30	50/50	50

System Information

License	Floating
Redundant Server	No
Host Name(s)	TestPC1
Host ID	132413241234

Previous Next Cancel

Figure 5-6: Review License Request

- Review your selections.
- If you are satisfied with your selections, click **Next**.

End User License Agreements (EULAs)

ISE Design Suite Software tools and No Charge IP product EULAs are agreed to during the product installation process. If you license IP products, you must accept the terms of the associated IP product EULAs before the license file can be generated.

Third-Party Licenses

A complete copy of the third-party licenses for 11.4 is located here: <install directory>/common/installer/idata/usenglish/idata/licenses/unified_3rd_party_eulas_11_4.txt

License Generation Confirmation

Upon completion of the license generation process, you will receive a confirmation message providing a summary of your licensing activity.

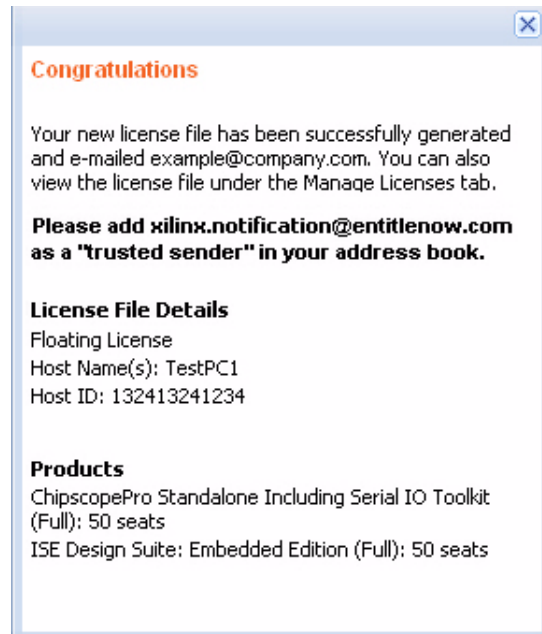


Figure 5-7: License Generation Confirmation

You will also receive a license generation confirmation email. This message contains the license key file that was generated as an attachment. Add 'xilinx.notification@entitlenow.com' as a trusted sender in your email address book.

Managing License Key Files

The Product Download and Licensing Site keeps track of the license key files you have generated. Select the 'Manage Licenses' tab to see all of the license key files that have been generated for your product licensing account.



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Product Download and Licensing

[Looking to register 10.1 or earlier software products?](#)

Account:

[Help](#)

[Download Software](#) | [Create New Licenses](#) | **[Manage Licenses](#)** | [Manage Users](#)

Manage License Files for Account: Xilinx Test Account

Host Name	Host Type	Host ID	License Type	OS	Created By	Created Date
TestPC1	Ethernet MAC	132413241234	Floating	Windows 32-bit	Demo User	30 MAR 2009
TestPC2	Ethernet MAC	abcde12abcde	Node	Windows 32-bit	Demo User	30 MAR 2009
TestPC4	Ethernet MAC	129012901290	Node	Windows 32-bit	Demo User	30 MAR 2009

TomTestPC1	132413241234	Floating	Tom Hirsh	30 MAR 2009															
Comments ISE Design Suite product licenses for Portland design team. Reference PO #123456.		<table border="1"> <thead> <tr> <th>Product</th> <th>Type</th> <th>Status</th> <th>Subscription End Date</th> <th>Activated Seats</th> </tr> </thead> <tbody> <tr> <td>ISE Design Suite: Embedded Edit</td> <td>Full</td> <td>Current</td> <td>30 MAR 2010</td> <td>40</td> </tr> <tr> <td>ChipscopePro Standalone Includ</td> <td>Full</td> <td>Current</td> <td>30 MAR 2010</td> <td>50</td> </tr> </tbody> </table>			Product	Type	Status	Subscription End Date	Activated Seats	ISE Design Suite: Embedded Edit	Full	Current	30 MAR 2010	40	ChipscopePro Standalone Includ	Full	Current	30 MAR 2010	50
Product	Type	Status	Subscription End Date	Activated Seats															
ISE Design Suite: Embedded Edit	Full	Current	30 MAR 2010	40															
ChipscopePro Standalone Includ	Full	Current	30 MAR 2010	50															
		<input type="button" value="Modify License"/>																	

Figure 5-8: Manage Licenses

From the Manage Licenses page, the actions described below can be taken depending upon your needs.

Exploring and Retrieving Your Existing License Key Files

Information regarding the license key files that have been generated in your product licensing account are presented in a “master / detail” view. By clicking on a row in the master view in the top table, detailed information about the license key file is displayed in the detail view in the bottom table. The detail view table includes the following:

- A list of product entitlements that have been activated in the key file.
- Comments associated with the key file.
- Ability to download, email, or copy and paste the contents of the license key file (click the corresponding icons on the lower left portion of the detail view).
- Ability to delete a license key file.
- Ability to view the end user license agreement you accepted (if applicable).

Modifying a License Key File

In order to modify an existing license key file, select the license key file in the master view and then click the **Modify License** button in the detail view. A license key file can be modified in one of the following ways:

- Rehosting or changing the license server host for a license key file.
- Activating or adding additional seats to an existing licensed product entitlement.
- Deactivating or removing seats from an existing licensed product entitlement.
- Activating or adding additional product entitlements to a license key file.
- Deactivating or deleting product entitlements from a license key file.

The process for modifying a key file uses the same input form as when the license key file was created except that additional product entitlements of the same license type (floating or node-locked) are made available for licensing.

Reclaiming Deactivated Product Entitlements

A product entitlement is deactivated when one of the following activities occur:

- Rehosting or changing the license server host for a license key file.
- Deactivating or removing seats from an existing licensed product entitlement.
- Deactivating or deleting product entitlements from a license key file.

The license generation facility will allow for the reallocation of the deactivated seats or product entitlements by making the corresponding seats or product entitlements available for activation in the product entitlements table on the Create License page.

Before the reallocation of entitlement occurs, you must first agree to an Affidavit of Destruction. This legal agreement is required to ensure that the deactivated product entitlements are no longer being used.

The number of allocation operations is recorded for each user. Administrators are allowed to reallocate product entitlements five times per major release, and end users are allowed to reallocate product entitlements three times per major release.

What Happens to Your License Key File

For each product entitlement that is activated, a FLEXnet increment line and corresponding package line is added to the license key file. When a license key file is modified to activate (add) seats for an existing or new product entitlement, additional increment or package lines are added to the license key file.

When a license key file is “rehosted” or is modified to deactivate (delete) seats or product entitlements, the corresponding increment lines are regenerated or removed from the modified license key file.

Managing User Access to Product Licensing Account

The responsibility of administering a product licensing account may be transferred or shared with another user. The ability to add or remove users from a product licensing account is managed under the ‘Manage Users’ tab.

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Product Download and Licensing

Looking to register 10.1 or earlier software products?

Account: Xilinx Test Account - 10101 Help

Download Software | Create New Licenses | Manage Licenses | **Manage Users**

Users for Account Xilinx Test Account

Name	E-Mail	Administrator	
Brown, Bob	Bob.Brown@example-company.com	<input checked="" type="checkbox"/>	
Johnson, Jane	Jane.Johnson@example-company.com	<input type="checkbox"/>	
Not Yet Registered	Sam.Smith@example-company.com	<input type="checkbox"/>	

Add new user

An e-mail invitation will be sent. Additional account information will be added when the new user logs in to the system.

Designate user as administrator

Add User

Jobs | Events | Webcasts | News | Investors | Feedback | Sitemap | Legal | Privacy | Trademarks

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Figure 5-9: Manage Users

Adding Users

To add a user to your product licensing account:

1. Type in the corporate email address of the new user.
2. Check the **Designate user as administrator** check box if you want the new user to have customer account administrative privileges.

Note: The email address you provide must be the same email address the user supplied or supplies when creating their Xilinx account. If not, the user may not be properly recognized when logging in.

If a user has already logged into the Product Download and Licensing Site, their name will automatically appear in the user list. If the user has never been to the site, the words “Not Yet Registered” will appear in the space for their name. Once the user has completed the sign in process, their name will be filled in.

In some instances, a customer account administrator may wish to have design team members administer license key files for their own use. By not checking the “Designate user as administrator” check box, the user will have the following restricted privileges:

- Only able to generate node-locked license keys.
- Only able to view and modify license key files they generated for themselves.
- Unable to manage users.

Removing Users

Administrative privileges may be removed from users of an account by unchecking the “Administrator” check box that corresponds to the respective user.

To remove a user from a product licensing account, click the Trash can icon that corresponds to the respective user.

Installing Your License Key File

Node Lock License Installation

After generating a license file, you will receive an e-mail from ‘xilinx.notification@entitlenow.com’.

1. Save the license file attached to the e-mail to a temporary directory on your local system
2. Run the Xilinx License Configuration Manager:
 - ♦ For Windows: Select **Start > Programs > Xilinx ISE Design Suite 11 > Manage Xilinx Licenses**.
 - ♦ For Linux: Type **xlcm** in a command-line shell.
3. Go to the 'Manage Xilinx Licenses' tab.
4. Click the **Copy License** button at the top of the page.
5. Browse to your license file (`Xilinx.lic`) and click **Open**.

This will copy this license file to the `C:\Xilinx` (Windows) or `<Home>/Xilinx` directory of your machine where it will be automatically found by the Xilinx tools.

6. Following the “Copy License” operation, the table on the Manage Xilinx Licenses tab will be updated with licensing information from the license file.
7. Press **Close** to exit the Xilinx License Configuration Manager.

Floating License Installation on Servers

For existing FLEXnet license servers, a common practice is to copy the contents of the license file, mailed from ‘xilinx.notification@entitlenow.com’, into the existing license file on your FLEXnet server.

Note: Restart the floating license server to enable the Xilinx licenses.

For New License Servers

1. Download the appropriate Xilinx FLEXnet license utilities for your server's operating system from the Xilinx Download Center:

<http://www.xilinx.com/download/index.htm>

Note: Only customer account administrators on the Product Download and Licensing Site have access to FLEXnet license utilities. To see if you are a customer account administrator, refer to the description in “[User Types and Actions](#).”

2. Unzip these utilities into a destination directory. It is recommended that you place this directory into your application search path.
3. Once the FLEXnet utilities are installed, you can run the following commands to start the floating license server:
 - ◆ For Linux
 - <Server Tool directory>/bin/lin/lmgrd -c <path_to_license>/Xilinx.lic -l <path_to_license>/log1.log
 - <Server Tool directory> bin/lin64/lmgrd -c <path_to_license>/Xilinx.lic -l <path_to_license>/log1.log
 - ◆ For Windows
 - <Server Tool directory>\bin\nt\lmgrd -c <path_to_license>\Xilinx.lic -l <path_to_license>\log1.log
 - <Server Tool directory>\bin\nt64\lmgrd -c <path_to_license>\Xilinx.lic -l <path_to_license>\log1.log

Client machines pointing to a floating license

1. Run the Xilinx License Configuration Manager (XLCM).
2. From the Acquire a License screen of the XLCM, click the ‘Manage Xilinx Licenses’ tab.
3. On the Manage Xilinx Licenses tab, enter the network path to the license server in the port@server format into the XILINXD_LICENSE_FILE field, and press the **Set** button next to it. The default Xilinx port number is 2100.

Note: For Linux operating systems, licensing environment variables cannot be set using the Xilinx License Configuration Manager (XLCM). The environment variable fields are read only, and they are grayed out and there are no “Set” buttons. The environment variable must be set using the appropriate shell and commands.

Technical Support, Services, and Documentation

This chapter describes how to access technical support, services, and documentation that are available. This chapter contains the following sections:

- “Technical Support”
- “Education Services”
- “Documentation”

Technical Support

For technical questions, visit the Xilinx® support site,

www.xilinx.com/support/mysupport.htm

where you can search the Answers Database or utilize the following self support features:

- Documentation Center , www.xilinx.com/support/documentation/index.htm
- Download Center, www.xilinx.com/support/download/index.htm
- Answer Browser, www.xilinx.com/support/answers/index.htm
- Xilinx User Community Forums, <http://forums.xilinx.com/xlnx>
- Design Resources - Video Demonstrations, www.xilinx.com/design

If you cannot resolve your issue using our online resources, you can contact Xilinx Technical Support directly at:

www.xilinx.com/support/techsup/tappinfo.htm

Education Services

Xilinx provides targeted, high-quality education services designed by experts in programmable logic design, and delivered by Xilinx qualified trainers. Available are onsite and online instructor led courses, and recorded e-learning for self paced learning.

For more information on training courses, free on-demand training, live online training, and upcoming events, visit the Xilinx Training website,

www.xilinx.com/support/education-home.htm

Documentation

Xilinx offers technical documentation to assistant users with using the ISE® Design Suite tools.

Context-Sensitive Help

Context-sensitive online Help is available for most ISE Design Suite tools that are available with a graphical user interface (GUI). From Project Navigator, select **Help > Help Topics** to access the online Help.

Software Manuals

Detailed software manuals about the ISE Design Suite applications and command-line functions are included as part of the software installation. After you install the software, you can select the **Help > Software Manuals** command in Project Navigator to access the software manuals collection.

Note: If you do not already have Adobe Acrobat Reader installed, you must do so to view the software manuals.

A new documentation navigation page is now the default startup page in Xilinx Platform Studio (XPS). From the documentation tab you can browse to all Embedded Development Kit (EDK) documentation. From outside XPS, open the file `edk_documentation_locator.htm`, which is found at `$XILINX_EDK/doc`.

To locate the Software Manuals on the website:

1. Go to the Documentation Center,
<http://www.xilinx.com/support/documentation/index.htm>
2. Click the **Design Tools** tab.
3. Click the Design Tool category, such as ISE, or click the **See All Design Tools Documentation** link.

User Tutorials

Tutorials can be found online at:

<http://www.xilinx.com/support/techsup/tutorials/index.htm>

Third-Party Licenses

The following licenses govern the use of certain third-party technology included in and/or distributed in connection with the Xilinx ISE® Design Suite software tools. Each license applies only to the applicable technology expressly governed by such license and not to any other technology.

PERL License

XILPERL is a modified version of PERL licensed under the Artistic license. The text of the artistic license may be seen at <http://www.perl.com/language/misc/Artistic.html>.

XILPERL is invoked implicitly by the ISE Design Suite software when it is needed and there is no need for the user to invoke it directly. The only difference between XILPERL and unmodified PERL is that XILPERL picks up its input script file from the location specified in the Xilinx environment variable, and not from STDIN.

XILPERL is not packaged in the ISE Design Suite software by Xilinx with the intention for it to be used as a standalone PERL by the end user. The unmodified version of PERL may be obtained in source or executable form from <http://www.perl.com>.

Scintilla and SciTE License

The ISE Design Suite software's graphical user interface uses the Scintilla Source Code Editor licensed under the following terms:

Copyright 1998-2003 by Neil Hodgson <neilh@scintilla.org>

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Regex License

The ISE Design Suite software contains the Regex software from the Boost libraries licensed under the following terms:

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Dr John Maddock

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zlib.h -- interface of the 'zlib' general purpose compression library

version 1.2.2, October 3rd, 2004

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version 1.2.3, July 18th, 2005

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Pthreads-win32 License

pthread-win32 - a POSIX threads library for Microsoft Windows

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Why pthreads-win32 did not use the GNU General Public License

The goal of the pthreads-win32 project has been to provide a quality and complete implementation of the POSIX threads API for Microsoft Windows within the limits imposed by virtue of it being a stand-alone library and not linked directly to other POSIX compliant libraries. For example, some functions and features, such as those based on POSIX signals, are missing.

Pthreads-win32 is a library, available in several different versions depending on supported compilers, and may be used as a dynamically linked module or a statically linked set of binary modules. It is not an application on it's own.

It was fully intended that pthreads-win32 be usable with commercial software not covered by either the GPL or the LGPL licenses. Pthreads-win32 has many contributors to it's code base, many of whom have done so because they have used the library in commercial or proprietry software projects.

Releasing pthreads-win32 under the LGPL ensures that the library can be used widely, while at the same time ensures that bug fixes and improvement to the pthreads-win32 code itself is returned to benefit all current and future users of the library.

Although pthreads-win32 makes it possible for applications that use POSIX threads to be ported to Win32 platforms, the broader goal of the project is to encourage the use of open

standards, and in particular, to make it just a little easier for developers writing Win32 applications to consider widening the potential market for their products.