

Cycle Model Studio

Version 9.3

Runtime Installation Guide

Non-Confidential



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Runtime Installation Guide

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Release Information

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Product Status

The information in this document is final, that is for a developed product.

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Chapter 1

Installing Cycle Model Studio Runtime Software

This document describes how to install the Cycle Model Studio Runtime software, which enables you to run Cycle Models on your system.

- [System Requirements](#)
- [Accessing the Cycle Model Studio Software File](#)
- [Installing the Cycle Model Studio Runtime Software](#)
- [Validating the Installation](#)

1.1 System Requirements

This section describes platform requirements for Windows users and Linux users.

1.1.1 For Windows Users

Cycle Model Studio is supported on Windows 7 (64-bit).

To use Cycle Model Studio to work with compiled components, the Visual C++ Redistributable Package for Visual Studio 2013 is required.

To compile components (such as for SoC Designer), Visual Studio 2013 Update 4 is required.

1.1.2 For Linux Users

The supported Linux operating systems are:

- Red Hat Enterprise Linux 6.6 (64-bit)
- CentOS 6.6 (64-bit)

1.2 Accessing the Cycle Model Studio Software File

You can access software from the *Downloads* page on the *Support* section of the Arm IP Exchange web site (<http://www.armipexchange.com>). You must register for an account to get access to this web page. Contact Arm Technical Support (support-esl@arm.com) if you have any questions.

Then you can copy the software file, or files, for your specific configuration and platform requirements to your host machine.

1.2.1 Installation Packages

Cycle Model Studio supports two installation packages that are intended for specific platforms and operating systems. There are two versions of each Linux installation: one that provides a tarball, and one that provides a graphical installation wizard. Select the version that you prefer to use.

To ensure you are installing the correct package, refer to the following table (substitute the current release number for *<version>*):

If you wish to install...	Use this Installation Package
The full release containing Cycle Model Studio for Linux and Windows packaged as a single TGZ.	tar: ARM-CycleModel-Runtime-files-Linux-x86_64-Install-v<version>
Standard Windows installer containing libraries and support files for using Cycle Models on Windows.	ARM-CycleModel-Runtime-files-Windows-Install-v<version>.exe

1.3 Installing the Cycle Model Studio Runtime Software

This section describes:

- [Linux Installation Procedure](#)
- [Windows Installation Procedure](#)

1.3.1 Linux Installation Procedure

This section describes installing Cycle Model Studio software on Linux computers:

- [Installing Using the Tar File](#)
- [Setting the License Environment Variable on Linux](#)
- [Setting Home and Path Environment Variables](#)

1.3.1.1 Installing Using the Tar File

Follow the steps below to install Cycle Model Studio software on Linux machines using the provided tar file:

1. Create a directory where you want to install the software:

```
mkdir <installation directory>
```

2. Change the working directory to the installation directory (if you are not already in that directory):

```
cd <installation directory>
```

3. Untar the Cycle Model Studio software kit that you downloaded:

```
tar xzf ARM-CycleModel-release-v<version>.tgz
```

1.3.1.2 Setting the License Environment Variable on Linux

Prior to running Cycle Model Studio or simulations using Cycle Models, you need to set the Arm-specific license environment variable, `ARMLMD_LICENSE_FILE`. This environment variable offers the best performance, although you may use the standard FlexNet license variable `LM_LICENSE_FILE` instead.

Linux csh shell

For the Linux csh shell, set:

```
setenv ARMLMD_LICENSE_FILE licenseFile
```

where *licenseFile* is either a license file or `<socket>@<hostname>` (for example, `7275@licserver`). For example:

```
setenv ARMLMD_LICENSE_FILE 7275@licserver
```

Linux Bourne shell

For the Linux Bourne shell, set:

```
ARMLMD_LICENSE_FILE=licenseFile  
export ARMLMD_LICENSE_FILE
```

where *licenseFile* is either a license file or `<socket>@<hostname>` (for example, `7275@licserver`). For example:

```
ARMLMD_LICENSE_FILE=7275@licserver
export ARMLMD_LICENSE_FILE
```

1.3.1.3 Setting Home and Path Environment Variables

Setting the CARBON_HOME and PATH environment variables is done using setup scripts. The two computing environment preparation commands that are used in Linux to prepare for running the Cycle Model Studio tool are:

- Bourne shell — `source <CMS install path>/etc/setup.sh`
- C-Shell — `source <CMS install path>/etc/setup.csh`

Cycle Model Studio users often find it convenient to insert one of these command lines into their login files. As a root user Administrator, you can insert the appropriate command line into the global logins of all users who require access the Model Studio tools.

1.3.2 Windows Installation Procedure

The Windows version of Cycle Model Studio software can be installed on Windows 7 computers. This section describes:

- [Installing Using the Windows Setup Wizard](#)
- [Setting the License Environment Variable on Windows](#)
- [Setting additional required environment variables](#)
- [Uninstalling Cycle Model Studio on Windows](#)

You can install multiple versions of Cycle Model Studio software on your Windows machine. The last installation sets the CARBON_HOME user environment variable; however, when you run Cycle Model Studio (**Start-> Programs->ARM Cycle Model Studio**), the program checks the location from which it is being launched and sets CARBON_HOME to the appropriate directory location.

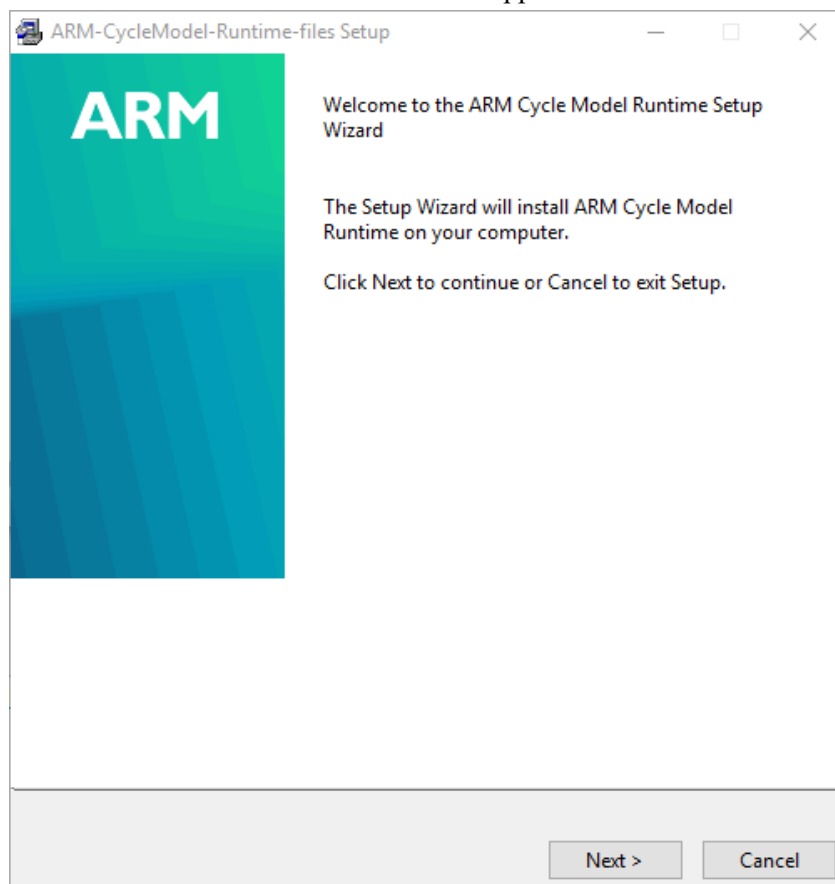
If you are planning to develop your own applications using Microsoft® Visual Studio, refer to the *Windows Visual C++ Integration Application Application Note* (ARM DUI1042) for additional required project settings.

1.3.2.1 Installing Using the Windows Setup Wizard

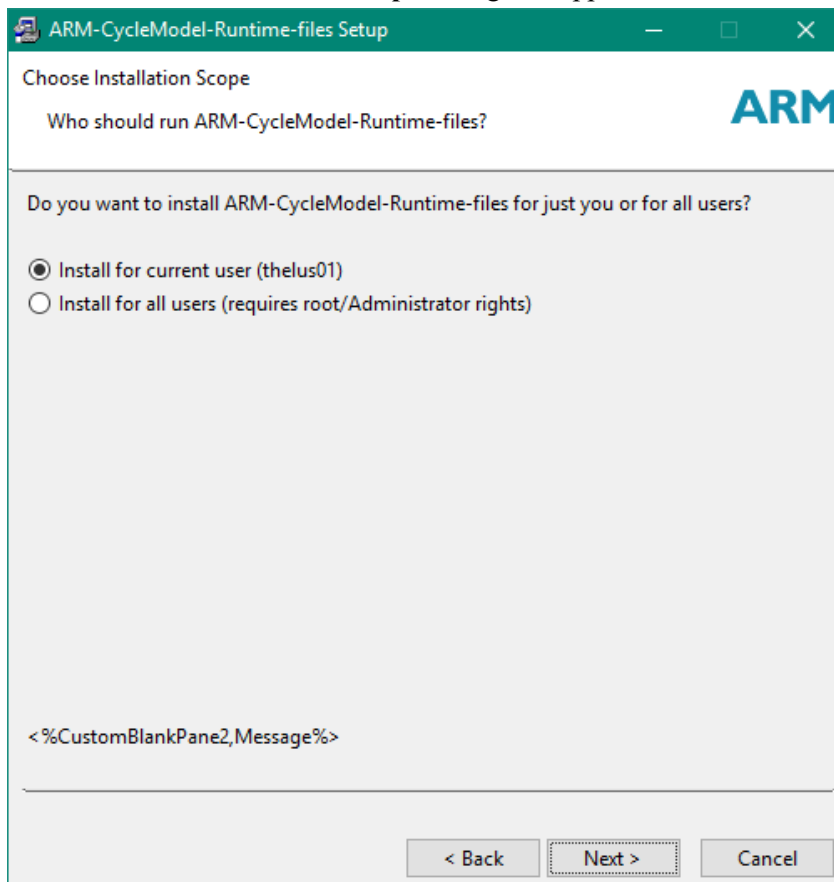
Follow the steps below to install Cycle Model Studio on Windows machines:

1. Download the software kit `ARM_CycleModel-install-Windows-v<version>.msi`.

2. Run the executable. The *Welcome* screen appears:

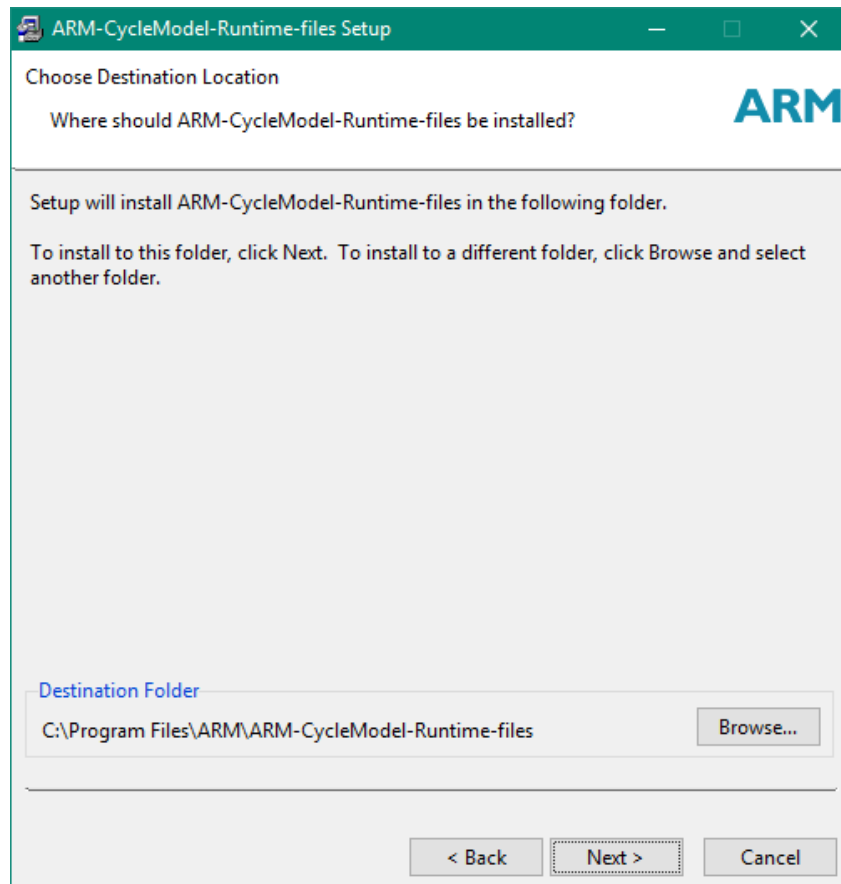


3. Click **Next**. The **Installation Scope** dialog box appears:

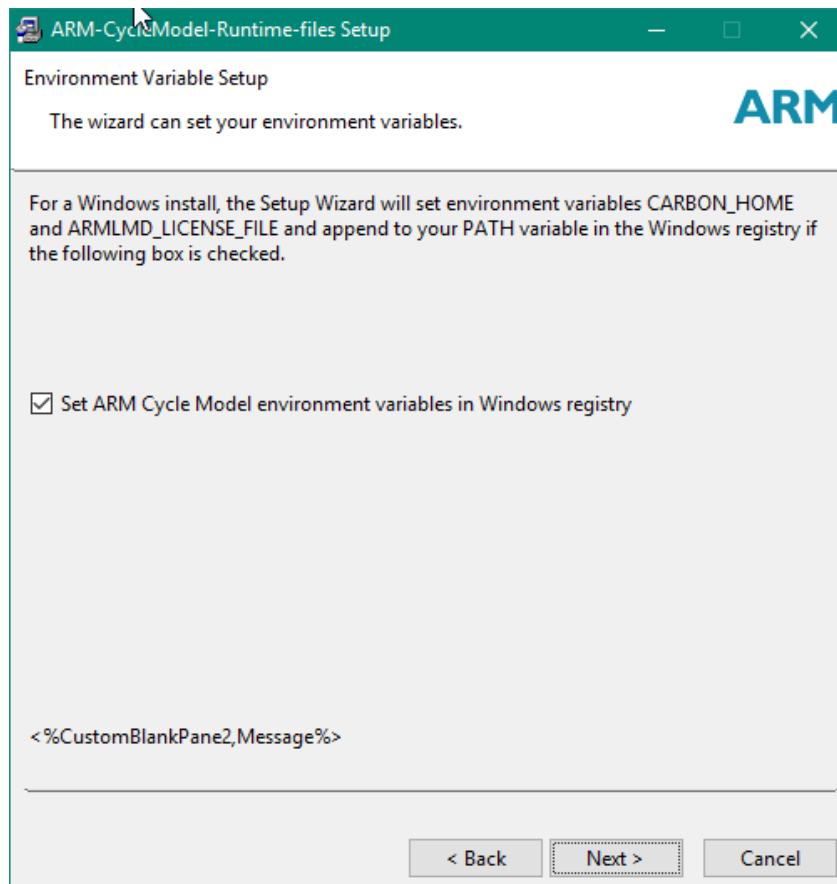


4. Select the radio button for either current user or all users.

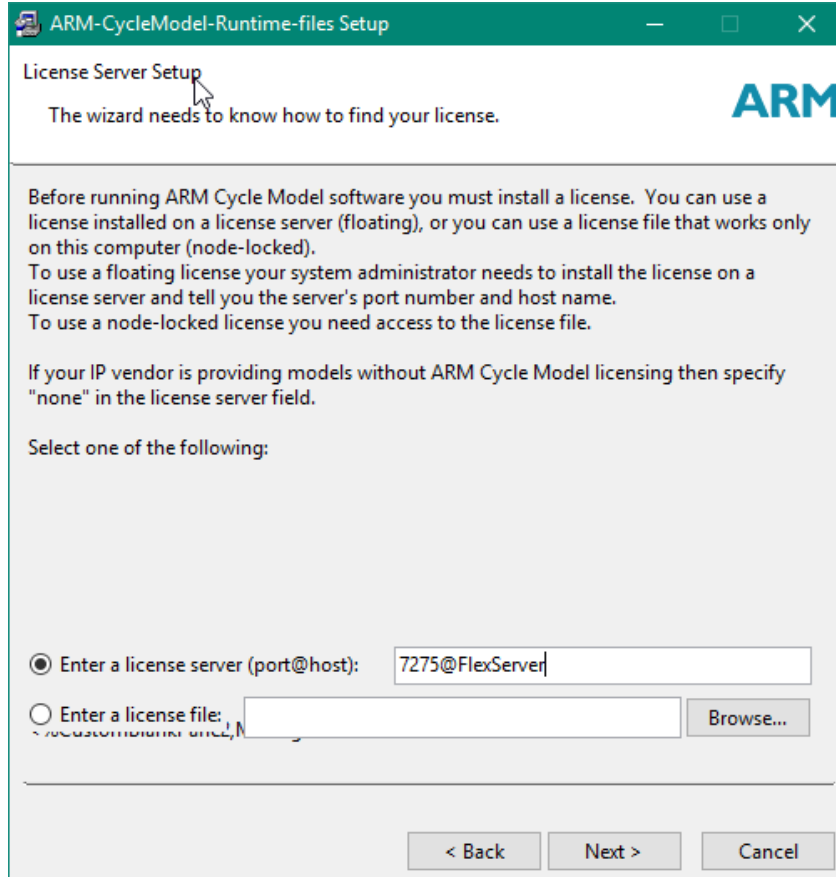
5. Click **Next**. The **Destination Location** dialog box appears:



6. Browse to select a new location, or accept the default and click **Next**. The **Environment Variable Setup** dialog box appears:



7. To have the installation wizard set the necessary environment variables (recommended), keep the checkbox enabled and click **Next**. The License Server Setup dialog appears.



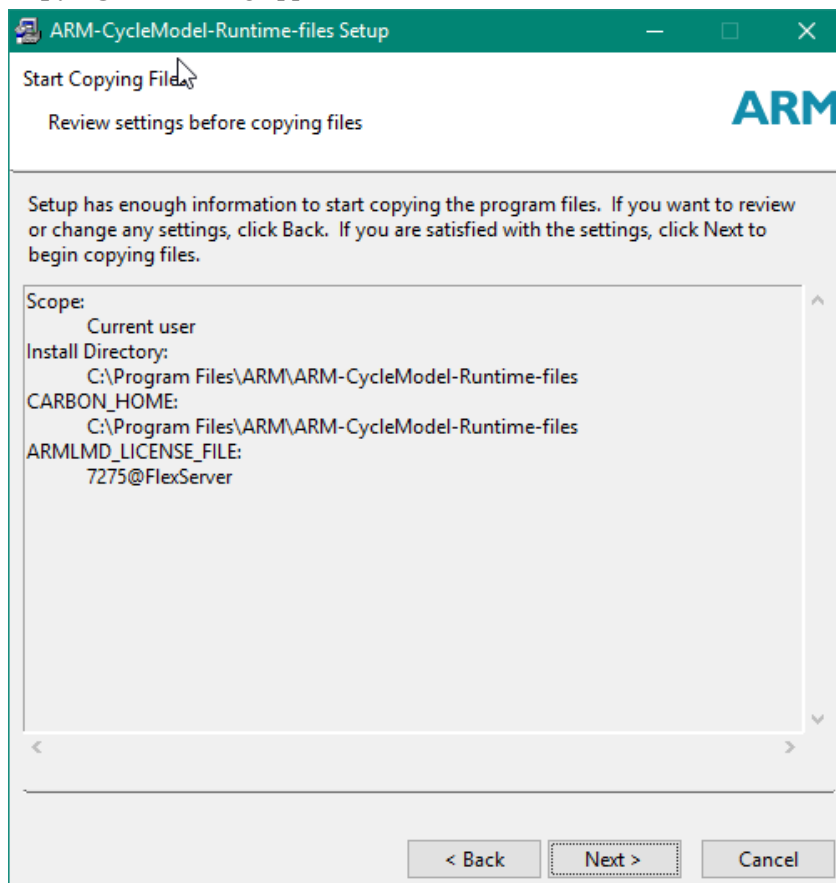
The screenshot shows a Windows-style dialog box titled "ARM-CycleModel-Runtime-files Setup". The main heading is "License Server Setup" with a mouse cursor pointing to it. Below the heading is the text "The wizard needs to know how to find your license." and the ARM logo. The main body contains instructions: "Before running ARM Cycle Model software you must install a license. You can use a license installed on a license server (floating), or you can use a license file that works only on this computer (node-locked). To use a floating license your system administrator needs to install the license on a license server and tell you the server's port number and host name. To use a node-locked license you need access to the license file. If your IP vendor is providing models without ARM Cycle Model licensing then specify 'none' in the license server field. Select one of the following:"

There are two radio button options:

- ☒ Enter a license server (port@host):
- ☐ Enter a license file:

At the bottom are three buttons: "< Back", "Next >", and "Cancel".

8. Enter the license server or license file in the appropriate field and click **Next**. The **Start Copying Files** dialog appears:



9. Click **Next**, then **Finish** to start the installation.

When the installation is complete, proceed to [Setting the License Environment Variable on Windows](#); this is required before you can run Cycle Model Studio.

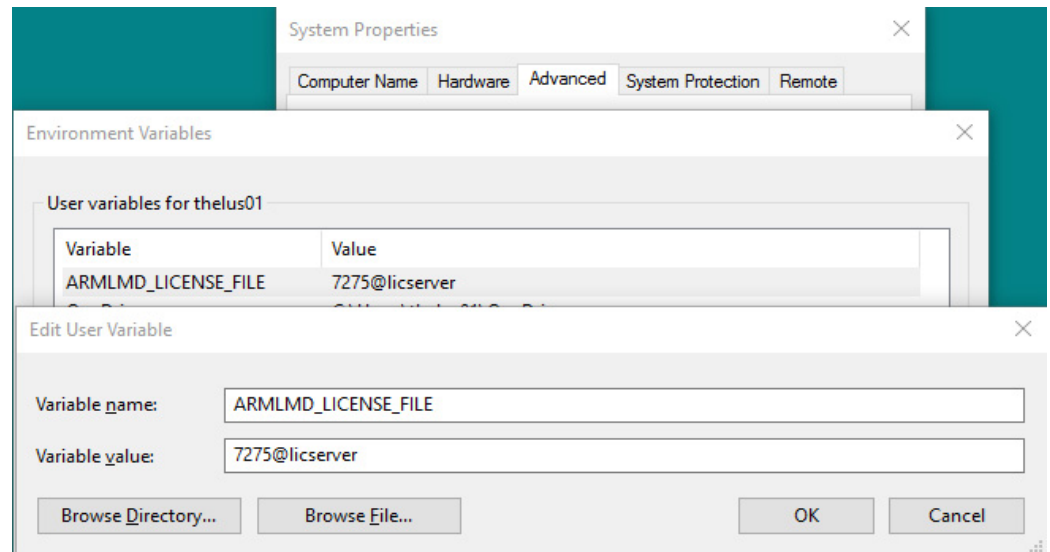
1.3.2.2 Setting the License Environment Variable on Windows

Prior to running Cycle Model Studio, or running simulations using Cycle Models, you need to set the Arm-specific license environment variable, ARMLMD_LICENSE_FILE. This environment variable offers the best performance, although you may use the standard FlexNet license variable LM_LICENSE_FILE instead.

Point ARMLMD_LICENSE_FILE to the location where the license file is located; either a license file or `<socket>@<hostname>`. For example:

```
> set ARMLMD_LICENSE_FILE=7275@licserver;7276@licserver
```


- If you are using a *floating license*, enter the license in the format *port@host*, for example, **7275@FlexServer**. A floating license requires that your system administrator install the license on a license server and provide you with the server name and port number:



To list multiple floating licenses, separate each license with a semi-colon, for example, **7275@FlexServer;7276@FlexServer**.

- If you are using a node-locked license, insert the path to the location on the local computer where the license file (*.lic) is located. A node-locked license only works on this one computer.

1.3.2.3 Setting additional required environment variables

The following environment variables need to be set:

- CARBON_ARCH — CARBON_ARCH=Win
- CARBON_HOME — Set to the location where you installed the software. For example:

```
> set CARBON_HOME=C:\Program Files (x86)\ARM\ARM Cycle Model Studio v<version_number>\
```
- PATH — Include the following paths:

```
PATH=%CARBON_HOME%\bin;%CARBON_HOME%\Win\lib;%CARBON_HOME%\Win\lib\winx\shared
```

1.3.2.4 Uninstalling Cycle Model Studio on Windows

You can uninstall Cycle Model Studio using the **Add or Remove Programs** dialog from the **Control Panel**.

1.3.3 Obtaining Accellera™ SystemC™

If you intend to use Accellera SystemC on a Windows platform, follow the instructions in the readme file `SystemCInstall.txt`, located in the `userdoc` directory of your Cycle Model Studio installation.

1.3.4 Completed Installation Directory Structure

Cycle Model Studio software is installed under a single directory structure as shown below. This file system must be visible to all systems that run Cycle Model Studio software, or multiple installation areas must exist. Following is a high-level view of the installation tree.

To fully test the installation, run the example as described in [“Validating on Linux” on page 1-19](#).

Root	Subdirectory or File	Contents
\$CARBON_HOME/	bin/	Cycle Model Studio executables
	examples/	Example designs
	fixate	Installation script (Linux only)
	include/	API header files
	installjammer/	Installer files
	lib/	Libraries
	Linux64/	Third-party executables for Linux 64-bit platform (e.g., gcc), and appropriate libraries
	makefiles/	Makefiles
	README	README file
	userdoc/	All end-user documentation
	Win/	Third-party executables for cross development, and appropriate Cycle Model Studio libraries

1.4 Validating the Installation

This section describes how to ensure that the installation of Cycle Model Studio has been successful.

1.4.1 Validating on Linux

To test the Cycle Model Studio Linux installation, you can run a Verilog example:

1. Copy the example files into your local work directory:

```
cp -r $CARBON_HOME/examples/twocounter ./twocounter
```

2. Change to your work directory:

```
cd twocounter
```

3. Run the Makefile within the twocounter directory:

```
make
```

The results of the example will be output to the twocounter.out file:

```
0: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
100: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
200: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
300: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
400: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
500: clk1=1 reset1=1 clk2=1 reset2=1 out1=0 out2=0
. . .
```

If the example runs without error, then Cycle Model Studio software has been installed properly.

1.4.2 Validating on Windows

To test the Cycle Model Studio Windows installation:

1. Ensure that the Linux system you are using for remote compilation is properly configured.
2. On the Windows system, launch Cycle Model Studio.
3. Add Verilog or SystemVerilog RTL files and run a test compile.

Installing Arm License Files

This section describes the licensing requirements for Cycle Model Studio.

A.1 Licensing Overview

Arm Cycle Model products are licensed via the FlexNet license manager Version 11.13. Licenses are available on the Arm Self-Service Portal (<http://silver.arm.com>). Registration and login are required.

A license server must be available on your network. The license server platform is not required to be the same as the tools platform. For example, you might have your development tools installed on Windows and use a Linux license server.

Contact Arm Technical Support (support-esl@arm.com) if you have any questions.

A.2 FlexNet Software Location

After installing Cycle Model Studio, the FlexNet programs and the FlexNet daemon are found in the following directories:

- Linux: `${CARBON_HOME}/Linux/bin/ES6`
- Windows: `%CARBON_HOME%\Win\bin\winx`

