S32 Design Studio for ARM 2.2

Installation Guide

Document Number: S32DSARMIG

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System requirements

To maximize performance, the S32DS ARM 2.2 tools should be installed on a computer with the recommended system configuration. While the tools will operate on a computer with the minimum configuration, the limited hardware will restrict its ability to function at desired performance levels.

Table 1: Requirements for Windows platform

Recommended Configuration • PC with 2.6 GHz Intel® Pentium® compatible processor or better • 4 GB of RAM • 4.5 GB of disk space (when installing all product features or all updates) • 3 GB of temporary storage (required only during the product installation) • USB port for communications with target hardware • Ethernet port for communications with target hardware (optional)
Operational Minimum Configuration • PC with 1.8 GHz Intel® Pentium® compatible processor • 2 GB of RAM • 4.5 GB of disk space • 3 GB of temporary storage (required only during the product installation) • USB port for communications with target hardware
Java Runtime • Java Runtime Environment 1.8 32-bit (included in the installation package)
Host Operating System Support • Microsoft® Windows® 7 32-bit and 64-bit • Microsoft® Windows® 8 32-bit and 64-bit • Microsoft® Windows® 8.1 32-bit and 64-bit • Microsoft® Windows® 10 32-bit and 64-bit **Note:** S32 Design Studio for ARM 2.2 supports all flavors and editions of the above operating systems as limited to the requirements of the Java Runtime Environment.

Table 2: Requirements for Linux platform

Recommended Configuration • PC with 2.6GHz Intel® Pentium® compatible processor or better • 4 GB of RAM • 4 GB of disk space • 2.5 GB of temporary storage (required only during the product installation) • USB port for communications with target hardware • Ethernet port for communications with target hardware (optional)
Operational Minimum Configuration • PC with 1.8 GHz Intel® Pentium® compatible processor • 2 GB of RAM

- 4 GB of disk space
- 2.5 GB of temporary storage (required only during the product installation)
- USB port for communications with target hardware

Java Runtime

- Java Runtime Environment 1.8 64-bit (must be installed separately)

Host Operating System Support

- Ubuntu LTS 16.04 64-bit
- Debian 8 64-bit
- CentOS 7 64-bit

Note: S32 Design Studio for ARM 2.2 supports all editions of the operating systems listed above and is limited only by the requirements of the Java Runtime Environment.

Installation prerequisites for Linux platforms

The following preliminary steps are required before you install S32 Design Studio for ARM 2.2.

- The user account installing the product needs to be a member of sudoers group
- Compatibility libraries necessary to run a 32-bit toolchain on a 64-bit Linux need to be installed
- **Table 3: Installing 32-bit compatibility libraries**

Libraries	Platform	Installing
lib32z1 lib32ncurses5 libstdc++6	Ubuntu 14	`sudo apt-get install lib32z1 lib32ncurses5 lib32stdc++6 lib32bz2-1.0 libc6:i386 libx11-6:i386 libxpm4:i386`

lib32bz2-1.0
glibc
libX11
libxpm4
	Ubuntu 16	`sudo dpkg --add-architecture i386`
		`sudo apt-get update`
		`sudo apt-get install lib32z1 libncurses5:i386 libstdc++6:i386 lib32bz2-1.0 libc6:i386 libx11-6:i386 libxpm4:i386`

	Debian	`sudo dpkg --add-architecture i386`
		`sudo apt-get update`
		`sudo apt-get install lib32z1 lib32ncurses5 lib32stdc++6 libc6:i386 libx11-6:i386 libxpm4:i386`

	CentOS	`sudo yum install zlib.i686 ncurses-devel.i686 glibc.i686 libstdc++.i686 libX11.i686 libXpm.i686`

- Java Runtime Environment 1.8 64-bit and JavaFX:

Table 4: Installing JRE 1.8 and JavaFX

Platform	Installing
Ubuntu and Debian	`sudo apt-get install openjdk-8-jre openjfx`
CentOS	1. Download the following rpm packages: • Headless Oracle Java Runtime Environment • Oracle Java Runtime Environment • Oracle JavaFX runtime 2. Install: `sudo rpm -Uvh java-1.8.0-oracle-headless-1.8.0.181-3.el7.R.x86_64.rpm java-1.8.0-oracle-1.8.0.181-3.el7.R.x86_64.rpm java-1.8.0-oracle-javafx-1.8.0.181-3.el7.R.x86_64.rpm`

Platform	Installing
	3. Configure the alternatives: `sudo alternatives --config java` Then type the selection number of installed java version.

- An up-to-date version of the MAKE utility:

Table 5: Installing MAKE

Platform	Installing
Ubuntu	`sudo apt-get install make`
Debian	`sudo apt-get install build-essential`
CentOS	`sudo yum install make`

- Webkit1 for GTK2:

Table 6: Installing libwebkitgtk

Platform	Installing
Ubuntu and Debian	`sudo apt-get install libwebkitgtk-1.0-0`
CentOS	`sudo yum install webkitgtk`

- The TCL package is required to run the scripts found in the `Project_Settings` container in a project.

Table 7: Installing TCL

Platform	Installing
Ubuntu and Debian	`sudo apt-get install tcl`
CentOS	`sudo yum install tcl`

- The 32-bit Python 2.7 needs to be installed to use the GDB Python build (`arm-none-eabi-gdb-py`):

Table 8: Installing Python

Platform	Installing
Ubuntu and Debian	`sudo apt-get install libpython2.7:i386`
CentOS	`sudo yum install python-libs.i686`

- The `unix2dos` utility:

Table 9: Installing unix2dos

Platform	Installing
Ubuntu and Debian	`sudo apt-get install tofrodos`
CentOS	`sudo yum install unix2dos`

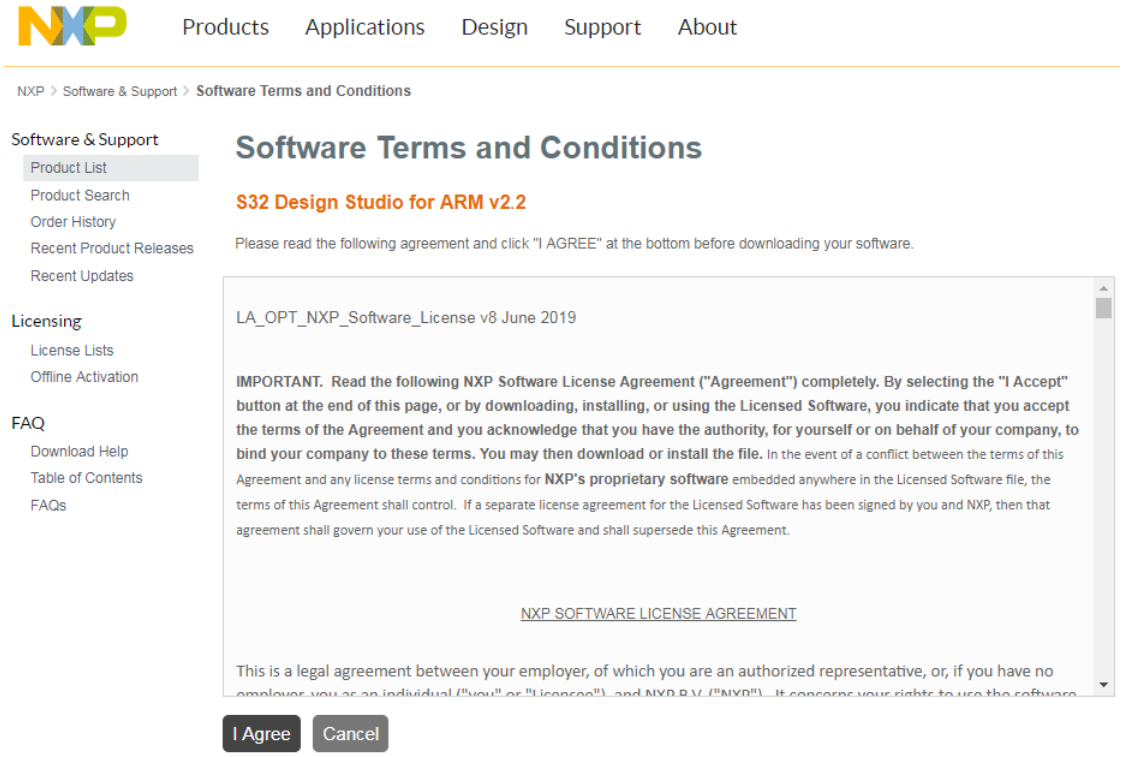
Downloading S32 Design Studio for ARM

Downloading the S32 Design Studio installer

The installer package contains the complete S32 Design Studio tool and can be used on the computer with no access to the Internet.

To download the offline installer, perform these steps:

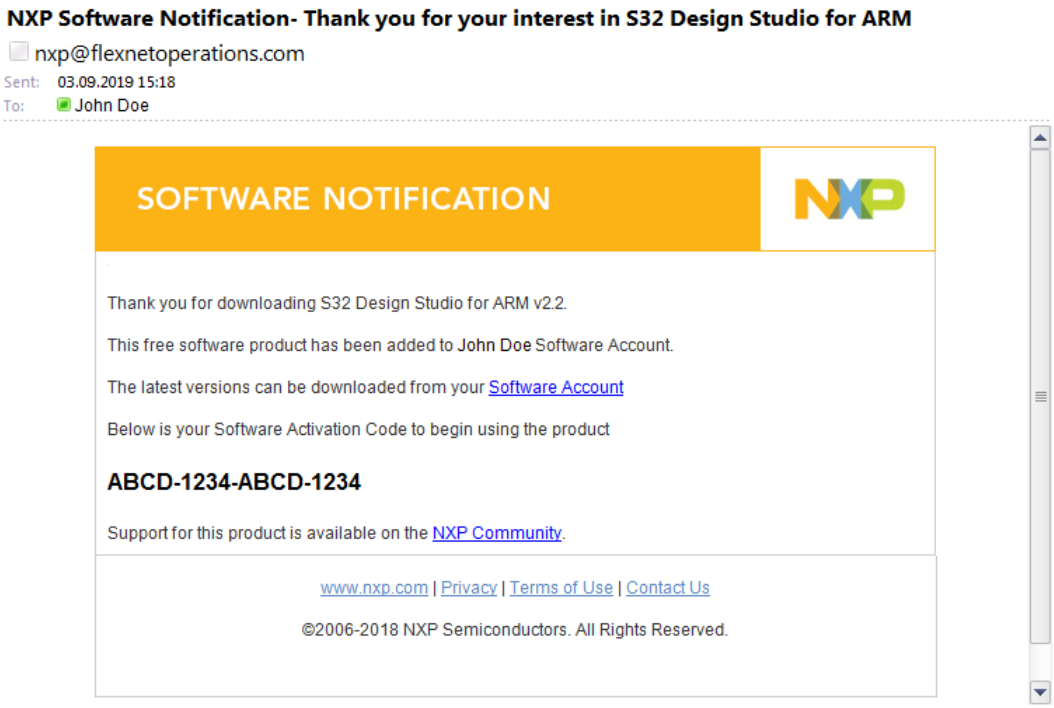
1. Go to the S32 Design Studio IDE page: www.nxp.com/S32DS.
2. Choose the required product and go to the **Downloads** tab.
3. Click **Download** next to the **S32 Design Studio for ARM 2.2 – Windows/Linux** hyperlink. If you have not logged in, you will be directed to the **NXP Sign In** page.
4. On the **Software Terms and Conditions** page review the license terms as you scroll down, then click **I Agree**.



5. In the **File Name** column, click the link next to the installer. If you want to download several files, select the check boxes and click **Download selected files**.
6. Confirm the download and specify the location where you want the installer package to be saved.

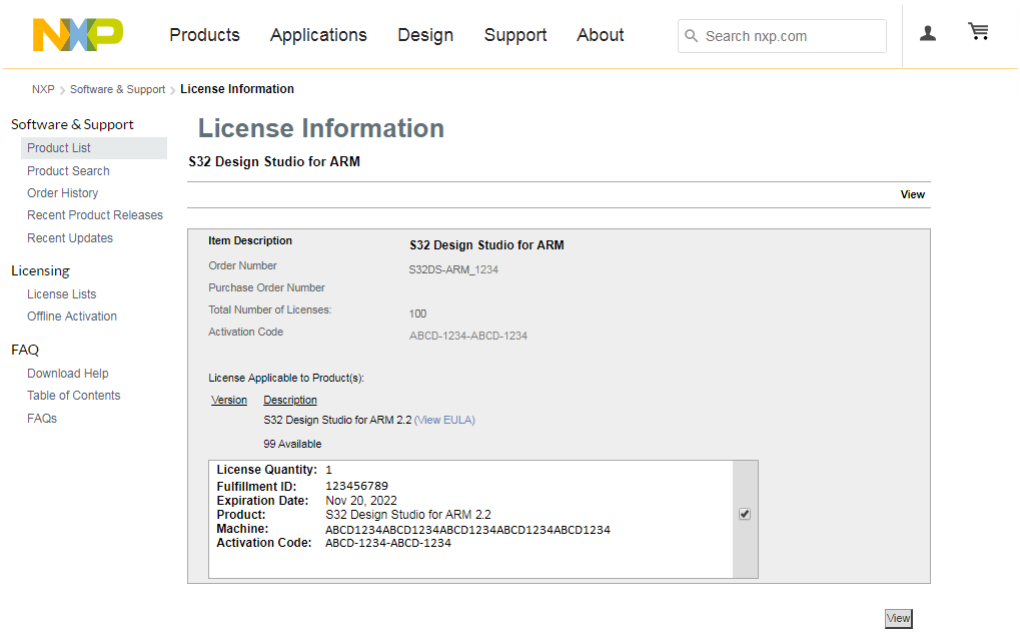
Obtaining the activation code

When you agree with the Software Terms and Conditions, you get a notification message with the activation code to your email address.



Alternatively, you can find your activation code on the NXP website.

1. Open the **Sign In or Register** page: www.nxp.com/security/login. The **My Account** page opens after signing in.
2. Click **Software Licensing and Support**, then click **Software accounts** > **View accounts**.
3. On the **Product List** page select the **NXP Software** products.
4. On the **Product Information** page click the product link.
5. The **Product Download** page appears. Click the **License Keys** tab to open the **License Information** page. Write down or copy the **Activation Code**, you will need it to continue the installation.



Note: Codes depicted in this document are provided for illustration only and are fictitious.

Installing S32DS ARM 2.2

To install S32 Design Studio, you need to run the downloaded installation package on the target workstation. Installing the product from the command line in the console or silent mode is not supported.

To install S32 Design Studio:

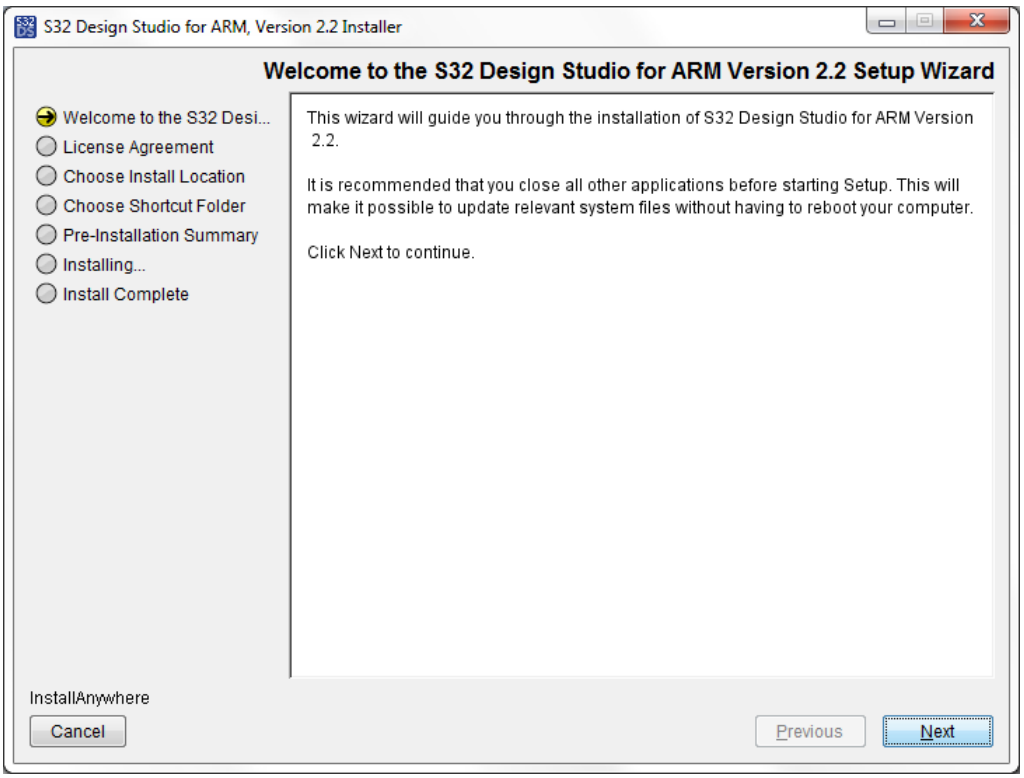
1. Go to the location where you saved the S32 Design Studio installation package, then do one of the following depending on the target platform:

Platform	Action
Windows	Double-click the S32 Design Studio installation package to start the installation procedure. **Note:** The user account designated for installing S32 Design Studio must be a member of the local Administrators security group. If User Account Control (UAC) is enabled, Windows will ask you to elevate the privileges when you run the installation package. When asked by UAC, grant the S32 Design Studio installer permissions to make changes on your computer.

Linux	Open the terminal and navigate to the directory with the downloaded BIN file:
	`cd ~/S32DS`
	Add the execute permissions to the binary:
	`chmod a+x ./<install_name>.bin`
	Run the installer:
	`./<install_name>.bin`
	Note: The user account used to install S32 Design Studio has to be a sudoers group member. You do not need the root privileges to install the product.

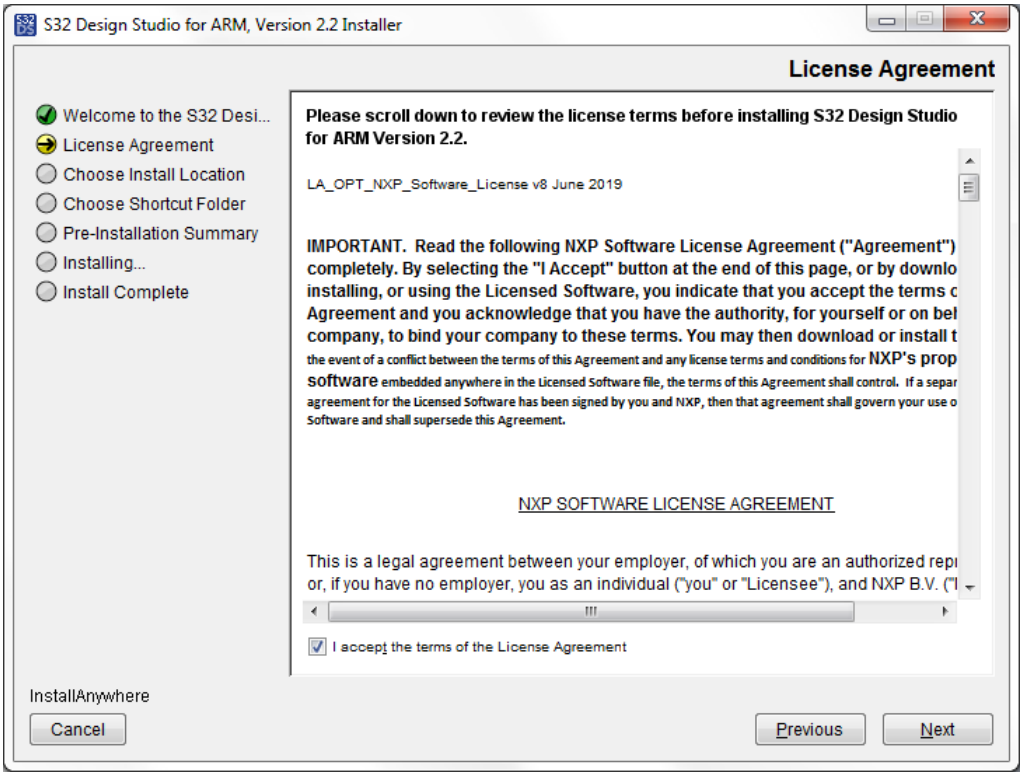
The S32 Design Studio splash screen appears.

2. When the install wizard appears, click **Next**:

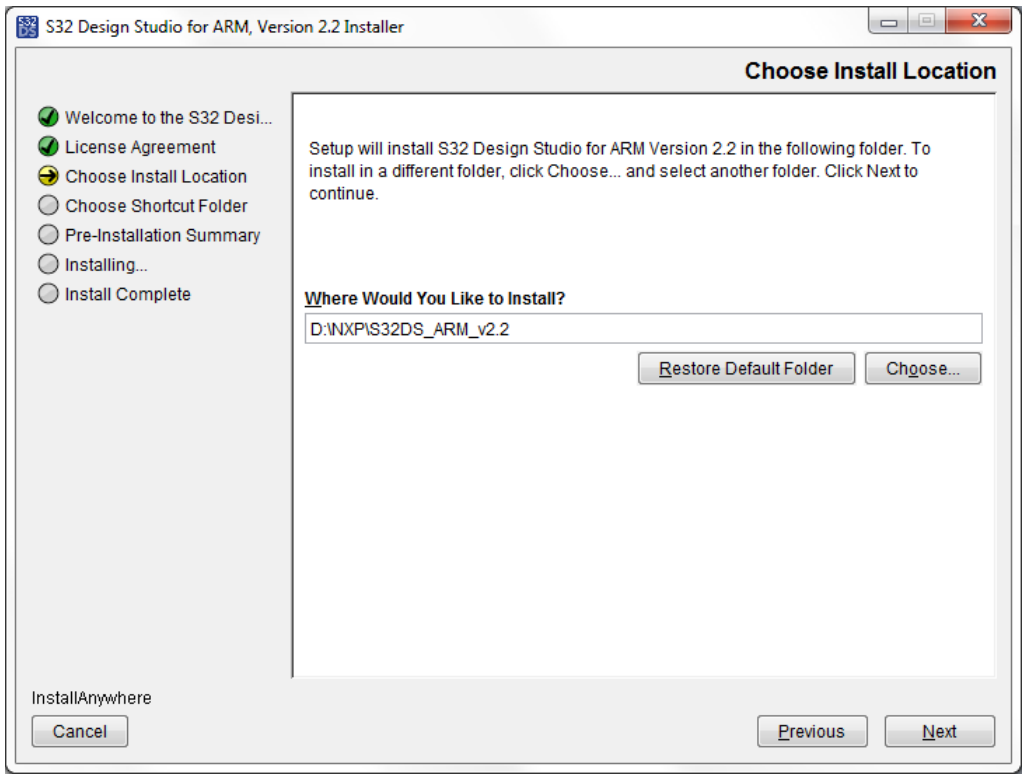


If you install S32DS ARM 2.2 on Windows, the **Choose additional feature(s)** page opens.

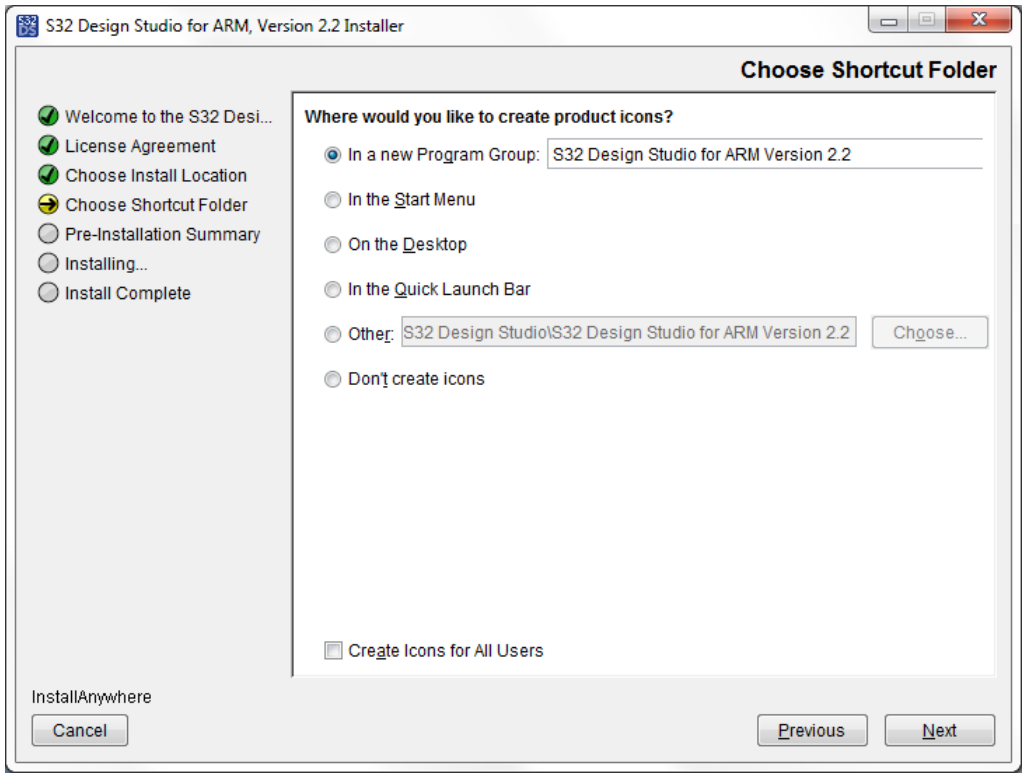
3. Choose the installation type for S32DS ARM 2.2, and then click **Next**.
4. Review the text of license terms as you scroll down it, then accept and click **Next**:



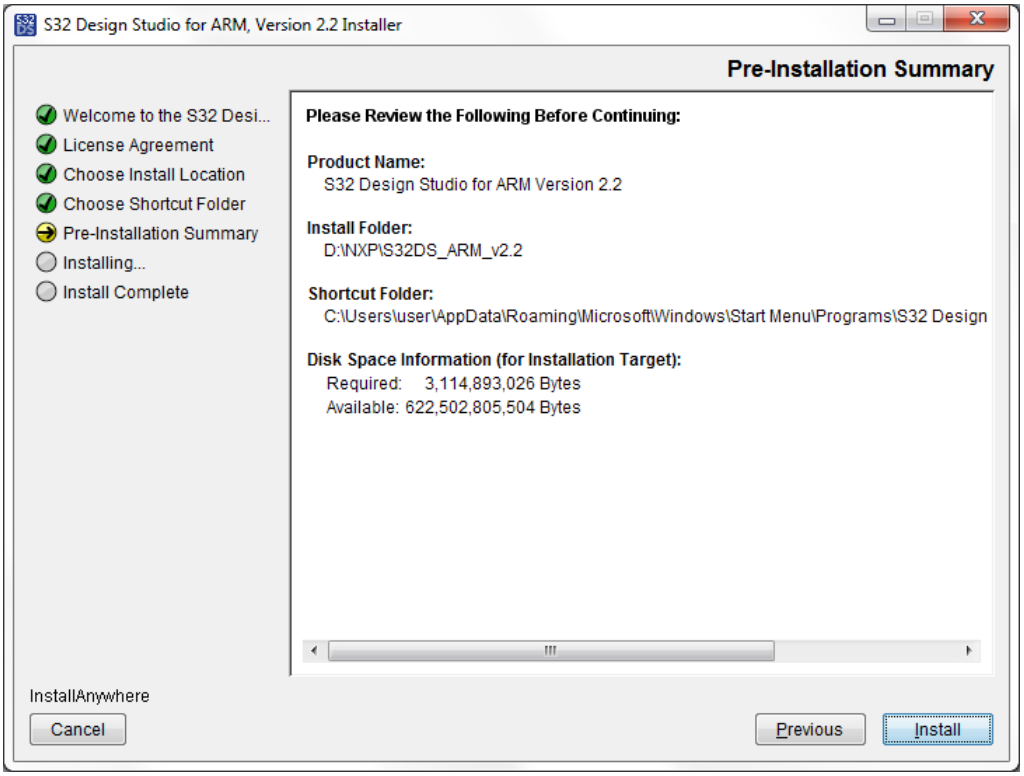
5. Specify the installation folder for S32 Design Studio. Click **Next**:



6. Choose the folder for S32 Design Studio program shortcuts. Select **Create Icons for All Users** if you want the shortcuts to be available for all users of this computer. Click **Next**:



7. Review the pre-installation summary before installing:

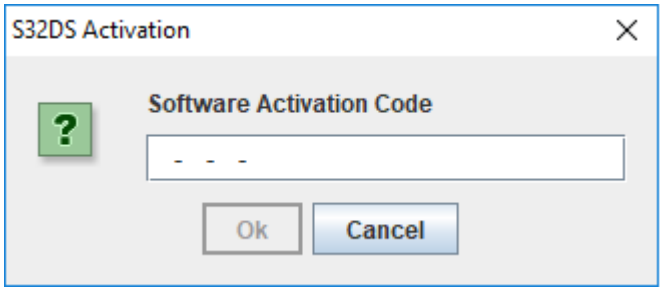


8. Click **Install**. Depending on the target platform, you may need to confirm elevation of the installation process.

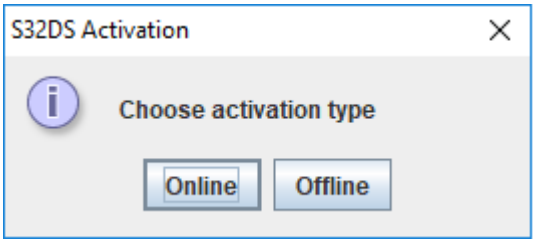
Platform	Action
Windows	The wizard checks for existence of C++ runtime installed, and, if necessary, start installing required libraries from the Microsoft Visual C++ 2010 and 2013 packages. No user input required.
Linux	The wizard prompts you to enter your password in the terminal window. When the **Enter your sudoer password in the Console...** message appears, switch to the terminal window and enter your user password.

9. The installation continues by checking your Windows permissions and installing the Flexera Windows licensing services on your computer. The services are required to license your instance of S32 Design Studio.
10. The installer looks for the S32 Design Studio license on your computer.

    Note: A license issued for an earlier version of S32 Design Studio cannot be used.
11. If no valid license is found on your computer, the installer notifies you about it and asks you to provide the activation code to obtain the license:



    Note: If you click **Cancel**, the installation rolls back.
12. Enter the activation code and click **OK**.
13. Choose the activation type for S32DS ARM 2.2:



- *Online* activation

  If you click **Online**, the installer sends an activation request to a remote activation server and automatically activates your instance of S32 Design Studio. If activation succeeds, S32 Design Studio is licensed and registered on your computer automatically.

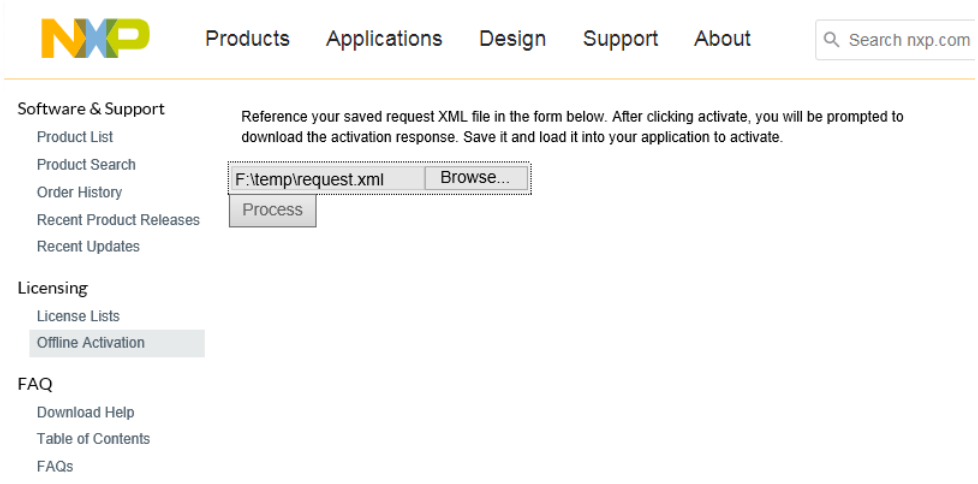
  Note: Make sure that TLS 1.2 protocol is enabled:

  - Open **Windows Control Panel** > **Network and Internet** > **Internet Options** > **Advanced** > **Settings**.
  - In the **Security** section make sure the **Use TLS 1.2** checkbox is checked. If not, check it and click the **Apply** button.
- *Offline* activation If you click **Offline**, the **Activation request** dialog box appears to let you to activate S32 Design Studio without access to the Internet. You will need another device connected to the Internet to communicate with the NXP website.

a) After you click **Offline** in the **S32DS Activation** message box, the **Activation request** dialog box appears to let you save the XML file with the activation request.
b) Save the XML file with the request for offline activation.
c) Copy the saved **request.xml** file to the device connected to the Internet. On that device, sign in on the NXP website: www.nxp.com/security/login. The **My Account** page opens where you downloaded the installation package, then click **Software Licensing and Support**, then click **Software accounts** > **View accounts**. On the **Product List** page select the **Licensing** > **Offline Activation**.

   Note: You do not necessarily have to license the S32 Design Studio in this installation session. Once you have created the offline activation request file, you can close the installer.

d) On the **Offline Activation** Web page, browse to the **request.xml** file on the device connected to the Internet. Click **Process** to submit the request file.



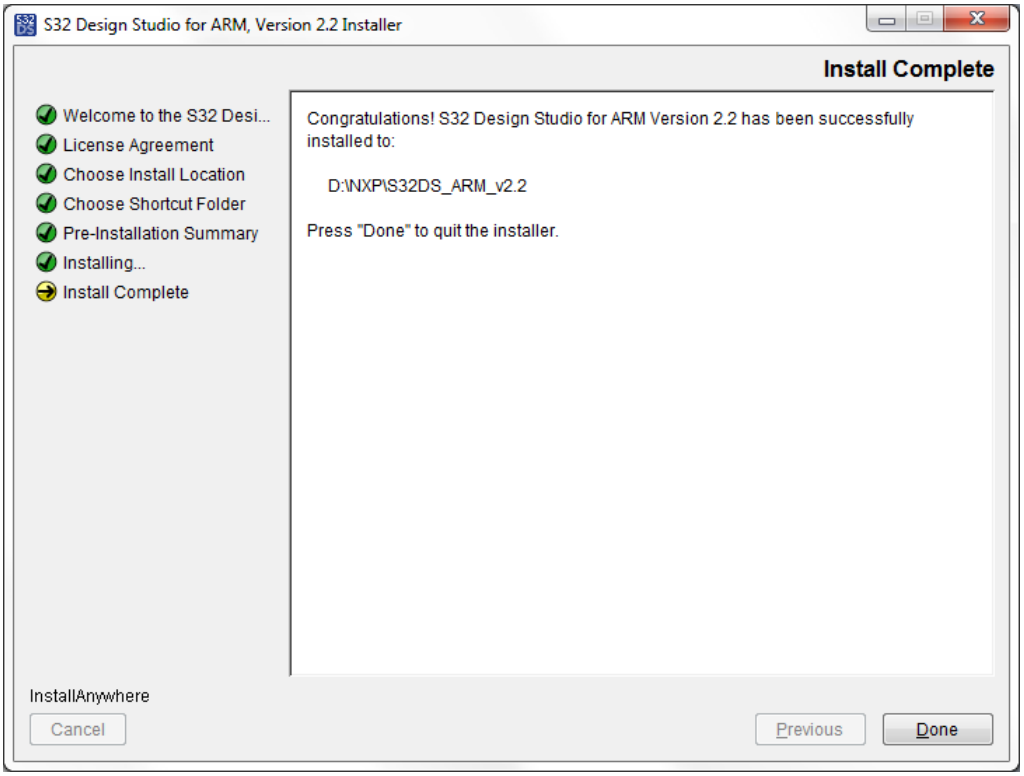
e) Save the generated **activation.xml** file from the website to the device.
f) Save the copy of the **activation.xml** file to your computer. If you have previously closed the installer, run it again and generate the **request.xml** file. Leave the generated request file intact.

g) After you save the activation request file, the **Activation response** dialog box appears. Browse to the **activation.xml** file and click **Load**.

14. If activation is successful, the installation continues automatically.

Note: During the installation process you may be prompted to proceed with the installation wizards of the specific drivers.

15. Wait until the S32 Design Studio installer finishes the installation and shows the **Install Complete** page. Click **Done**:



16. Do one of the following to start S32DS ARM 2.2.

a. Locate the shortcut depending on your selection during the installation, and double-click the product icon.
b. Specify the folder path where your workspace will be located. Click **OK**.

S32 Design Studio for ARM 2.2 appears on the desktop and displays the **S32DS Extensions and Updates** window. This tool will assist you in installing additional software packages that are required for creating embedded software for the supported devices. Learn the details from the *S32 Design Studio for ARM 2.2 User Guide*. To launch the tool again, click **Help** > **S32DS Extensions and Updates** from the menu. In addition to device support, the functionality can be extended with support for new debugging instruments such as hardware debugging interfaces and simulators. Integration of third-party products is implemented through plug-ins.

To learn how to use informational resources of S32 Design Studio for ARM 2.2, watch the video on the **Getting Started** page. The page is loaded by default when you launch the product. To open this page, click **Help** > **Getting Started** from the menu.

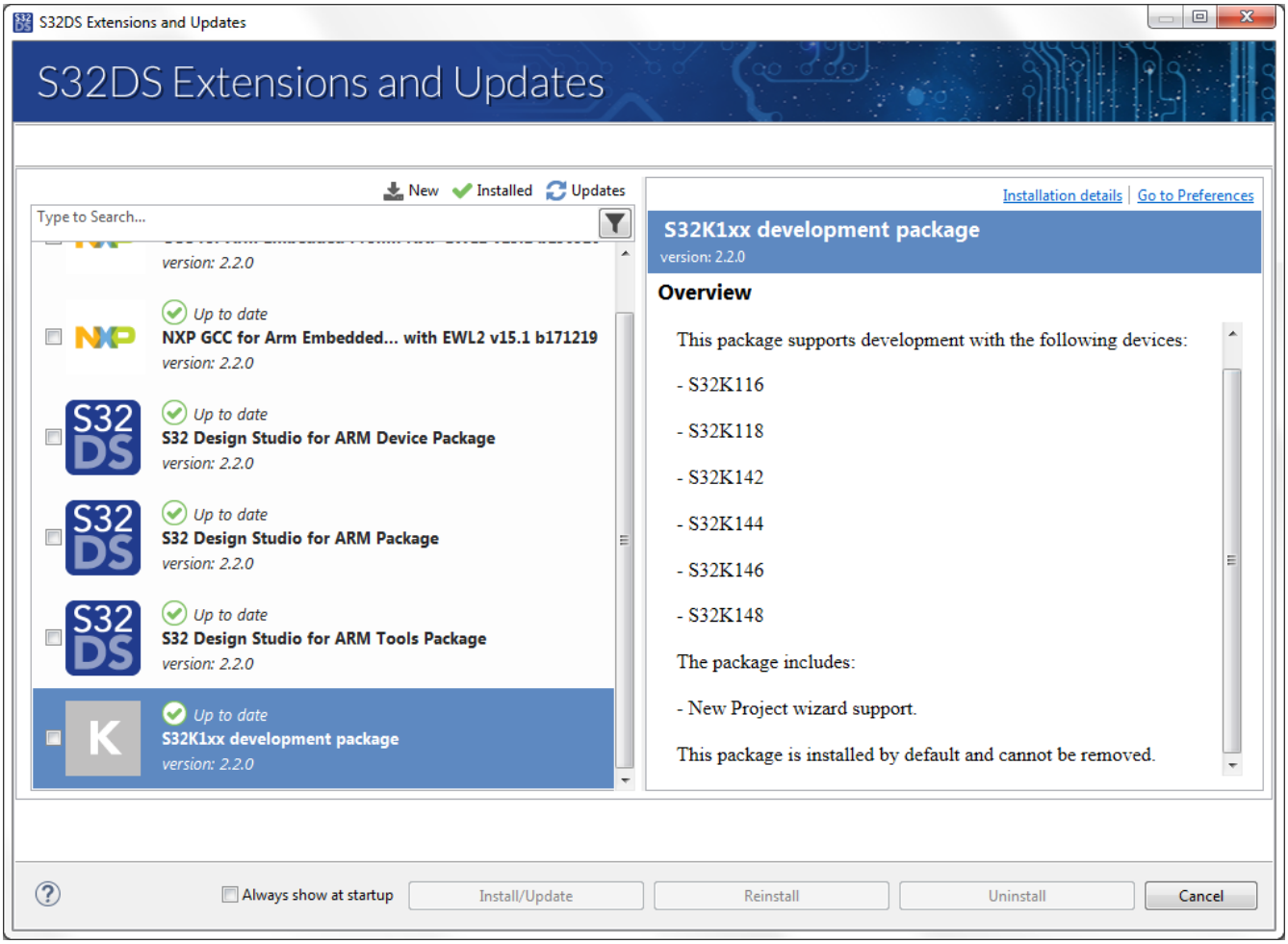
Note: To play back the video in Linux for the first time, select the multimedia plug-ins required by Java and click **Install**.

Installing product updates and packages

Support for the NXP ARM based processor families is provided with additional software packages. The S32DS Extensions and Updates tool helps you to find and install the latest product updates and software packages. The lookup is performed across the sites that are specified in the product preferences. For details, refer to S32 Design Studio User Guide.

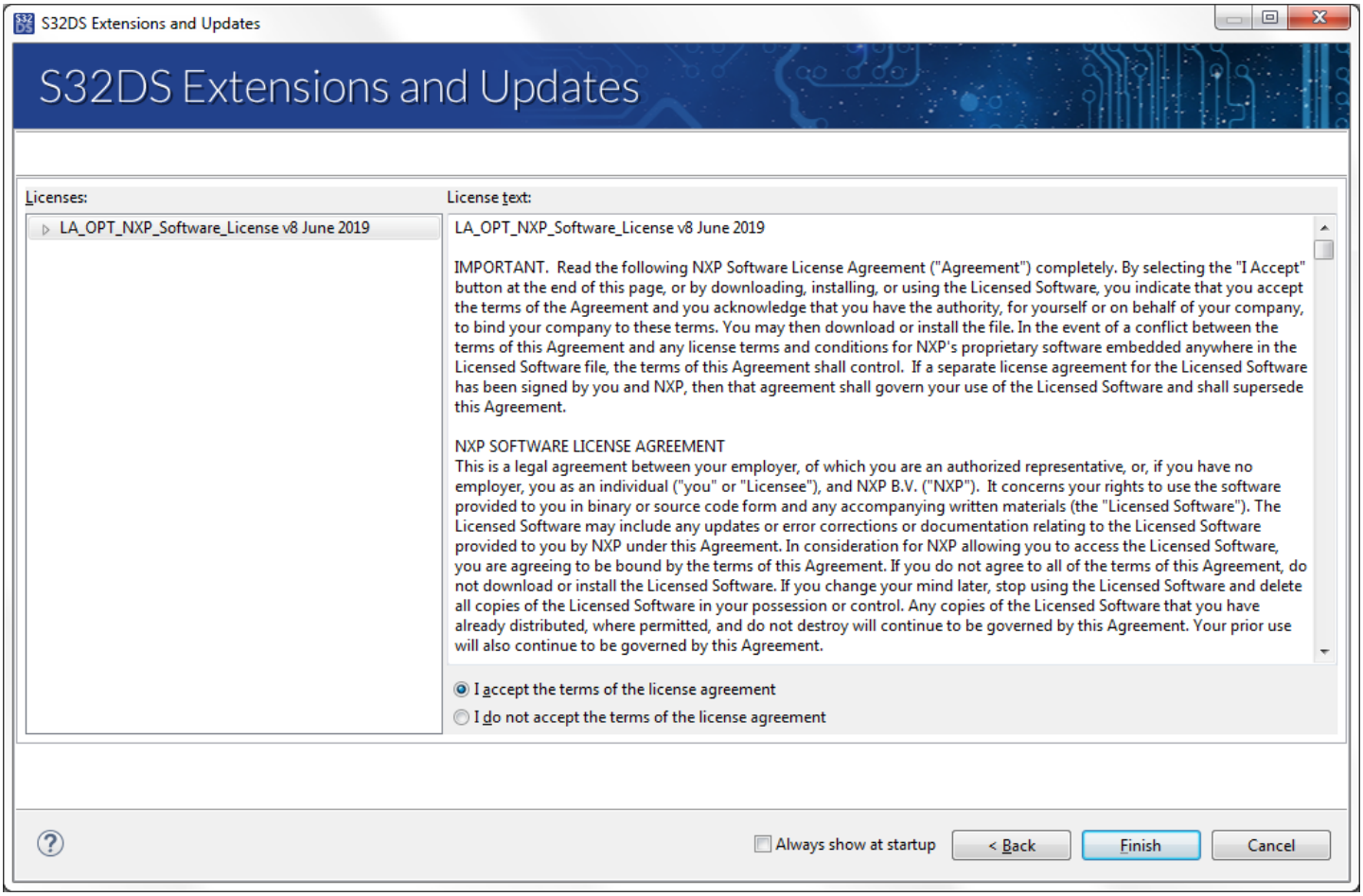
To install updates and additional packages to S32 Design Studio:

1. From the menu, click **Help** > **S32DS Extensions and Updates**.
2. In the left pane of the **S32DS Extensions and Updates** wizard, find all software packages already installed and ready to be installed.
    - Use the **New**, **Installed** and **Updates** toggle buttons to show and hide packages of a respective type.
    - Use the filter button to show packages of the required hardware type. Removing the hardware filter clears the package selection.



Click a package in the left pane. The right pane loads the description of the package.

3. Check the box on each package that you need to install or update. Click **Install/Update**.
4. On the next page, verify the selected packages and click **Next**.
5. Accept the license terms. Click **Finish**.



6. After the installation is complete, restart S32 Design Studio.

How to Reach Us:

Home Page:

nxp.com

Web Support:

nxp.com/support

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