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 lib32zl lib32ncurses5 lib32stdc++6 lib32bz2-1.0 libc6:i386 libx11-6:i386 libxpm4:i386
lib32bz2-1.0 glibc libX11 libxpm4	Ubuntu 16	<pre>sudo dpkgadd-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</pre>
	Debian	<pre>sudo dpkgadd-architecture i386 sudo apt-get update sudo apt-get install lib32z1 lib32ncurses5 lib32stdc++6 libc6:i386 libx11-6:i386 libxpm4:i386</pre>
	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	 Download the following rpm packages: Headless Oracle Java Runtime Environment Oracle Java Runtime Environment Oracle JavaFX runtime Install:
	<pre>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</pre>

Platform	Ins	stalling
	3.	Configure the alternatives:
		sudo alternativesconfig 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.

NXP Software Notification- Thank you for your interest in S32 Design Studio for ARM

nxp@ Sent: 03.0 To: Jo	flexnetoperations.com 9.2019 15:18 ohn Doe		
	SOFTWARE NOTIFICATION	NP	
	Thank you for downloading S32 Design Studio for ARM v2.2. This free software product has been added to John Doe Software Account. The latest versions can be downloaded from your <u>Software Account</u>		- - ≣
	Below is your Software Activation Code to begin using the product ABCD-1234-ABCD-1234 Support for this product is available on the <u>NXP Community</u> .		
	www.nxp.com Privacy Terms of Use Contact Us ©2006-2018 NXP Semiconductors. All Rights Reserved.		

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.

NXP > Software & Suppor	t > License Inforn	nation						
Software & Support Product List Product Search Order History	Licen S32 Design	Studio for ARM	ation				Vie	
Recent Product Releases							vic	
Recent Updates	Item Desci	ription	\$32 Desig	n Studio for ARM	1			
Licensing License Lists Offline Activation FAQ Download Help Table of Contents FAQs	Order Num Purchase C Total Numb Activation C License Ap <u>Version</u>	ber Vrder Number er of Licenses: Code plicable to Product(s): <u>Description</u> S32 Design Studio for A 99 Available	S32DS-ARN 100 ABCD-1234 RM 2.2 (View EUL	4_1234 -ABCD-1234 A)				
	License Fulfillm Expirati Product Machine Activati	Quantity: 1 ent ID: 12345673 on Date: Nov 20, 2 : S32 Desig : ABCD123 on Code: ABCD-123	89 022 gn Studio for ARN 4ABCD1234ABCD 44-ABCD-1234	/ 2.2 1234ABCD1234A	BCD1234	Ø		

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</install_name>				
	Run the installer:				
	./ <install_name>.bin</install_name>				
	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:

832 Design Studio for ARM, Version 2.2 Installer				
Welcome to the S32 Design Studio for ARM Version 2.2 Setup Wizard				
 Welcome to the S32 Desi License Agreement Choose Install Location Choose Shortcut Folder Pre-Installation Summary Installing Install Complete 	This wizard will guide you through the installation of S32 Design Studio for 2.2. It is recommended that you close all other applications before starting Set make it possible to update relevant system files without having to reboot y Click Next to continue.	ARM Version up. This will our computer.		
InstallAnywhere Cancel	Previous	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:

832 Design Studio for ARM, Version 2.2 Installer		
	License Agreement	
 ✓ Welcome to the S32 Desi → License Agreement 	Please scroll down to review the license terms before installing S32 Design Studio for ARM Version 2.2.	
Choose Install Location Choose Shortcut Folder	LA_OPT_NXP_Software_License v8 June 2019	
 Pre-Installation Summary Installing Install Complete 	IMPORTANT. Read the following NXP Software License Agreement ("Agreement") completely. By selecting the "I Accept" button at the end of this page, or by downlo installing, or using the Licensed Software, you indicate that you accept the terms of Agreement and you acknowledge that you have the authority, for yourself or on bel company, to bind your company to these terms. You may then download or install t the event of a conflict between the terms of this Agreement and any license terms and conditions for NXP's prop SoftWare embedded anywhere in the Licensed Software file, the terms of this Agreement shall control. If a separ agreement for the Licensed Software has been signed by you and NXP, then that agreement shall govern your use o Software and shall supersede this Agreement.	
	NXP SOFTWARE LICENSE AGREEMENT	
	This is a legal agreement between your employer, of which you are an authorized repror, if you have no employer, you as an individual ("you" or "Licensee"), and NXP B.V. ("I +	
	✓ I accept the terms of the License Agreement	
InstallAnywhere Cancel	Previous Next	

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

🞇 S32 Design Studio for ARM, Versi	ion 2.2 Installer
	Choose Install Location
 Welcome to the S32 Desi License Agreement Choose Install Location Choose Shortcut Folder Pre-Installation Summary Installing Install Complete 	Setup will install S32 Design Studio for ARM Version 2.2 in the following folder. To install in a different folder, click Choose and select another folder. Click Next to continue. Where Would You Like to Install? D:\NXP\S32DS_ARM_v2.2 Restore Default Folder Choose
InstallAnywhere	
Cancel	Previous 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**:

🞇 S32 Design Studio for ARM, Versi	ion 2.2 Installer	
	Choose Shor	tcut Folder
 Welcome to the S32 Desi License Agreement Choose Install Location Choose Shortcut Folder Pre-Installation Summary Installing Install Complete 	Where would you like to create product icons? In a new Program Group: S32 Design Studio for ARM Version 2.2 In the Start Menu On the Desktop In the Quick Launch Bar Other: S32 Design Studio\S32 Design Studio for ARM Version 2.2 Don't create icons Create Icons for All Users	Ch <u>o</u> ose
InstallAnywhere Cancel	Previous	Next

7. Review the pre-installation summary before installing:

🞇 S32 Design Studio for ARM, Vers	ion 2.2 Installer
	Pre-Installation Summary
 Welcome to the S32 Desi License Agreement Choose Install Location Choose Shortcut Folder Pre-Installation Summary Installing Install Complete 	Please Review the Following Before Continuing: Product Name: S32 Design Studio for ARM Version 2.2 Install Folder: D:INXP\S32DS_ARM_v2.2 Shortcut Folder: C:Users\user\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\S32 Design Disk Space Information (for Installation Target): Required: 3,114,893,026 Bytes Available: 622,502,805,504 Bytes
InstallAnywhere	
Cancel	Previous Install

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:

S32DS Activ	vation	×
?	Software Activation Code	
	Ok Cancel	

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:

S32DS Activation		
(i) Choose activation type		
Online Offline		

• 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.

NP	Products	Applications	s Design	Support	About	Q Search nxp.com
Software & Support Product List	Reference your saved request XML file in the form below. After clicking activate, you will be prompted to download the activation response. Save it and load it into your application to activate.					
Product Search	F:\temp\re	quest.xml	Browse			
Order History Recent Product Releases Recent Updates	Process					
Licensing						
License Lists						
Offline Activation						
FAQ						
Download Help						
Table of Contents						
FAQs						

- 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**:

🞇 S32 Design Studio for ARM, Versi	on 2.2 Installer
	Install Complete
 ♦ Welcome to the S32 Desi ♦ License Agreement ♦ Choose Install Location ♦ Choose Shortcut Folder ♥ Pre-Installation Summary ♥ Installing ♦ Install Complete 	Congratulations! S32 Design Studio for ARM Version 2.2 has been successfully installed to: D:INXP\S32DS_ARM_v2.2 Press "Done" to quit the installer.
InstallAnywhere Cancel	Previous 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.

🞇 S32DS Extensions and Updates

S32DS Extensions and Updates

		\Box
Licenses:	License <u>t</u> ext:	
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	I accept the terms of the license agreement	
?	Always show at startup]

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

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