



ALTAIR

ONLY FORWARD

Altair® Flux® & Altair® FluxMotor® 2022.1

Installation Guide

Updated: 06/30/2022

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Altair Embed®/Digital Power Designer ©2012-2022

Altair Embed® Viewer ©1996-2022

Altair® ESAComp® ©1992-2022

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Altair® Inspire™ Friction Stir Welding ©1996-2022
Altair® Inspire™ Mold ©2009-2022
Altair® Inspire™ PolyFoam ©2009-2022
Altair® Inspire™ Play ©2009-2022
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Altair® OptiStruct® ©1996-2022
Altair® PollEx™ ©2003-2022
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Altair® SEAM® ©1985-2022
Altair® SimLab® ©2004-2022
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Altair® SimSolid® ©2015-2022

Altair® ultraFluidX® ©2010-2022

Altair® Virtual Wind Tunnel™ ©2012-2022

Altair® WinProp™ ©2000-2022

Altair® WRAP™ ©1998-2022

Altair® S-FRAME® ©1995-2022

Altair® S-STEEL™ ©1995-2022

Altair® S-PAD™ ©1995-2022

Altair® S-CONCRETE™ ©1995-2022

Altair® S-LINE™ ©1995-2022

Altair® S-TIMBER™ ©1995-2022

Altair® S-FOUNDATION™ ©1995-2022

Altair® S-CALC™ ©1995-2022

Altair® Structural Office™ ©2022

Altair Packaged Solution Offerings (PSOs)

Altair® Automated Reporting Director™ ©2008-2022

Altair® e-Motor Director™ ©2019-2022

Altair® Geomechanics Director™ ©2011-2022

Altair® Impact Simulation Director™ ©2010-2022

Altair® Model Mesher Director™ ©2010-2022

Altair® NVH Director™ ©2010-2022

Altair® NVH Full Vehicle™ ©2022

Altair® NVH Standard™ ©2022

Altair® Squeak and Rattle Director™ ©2012-2022

Altair® Virtual Gauge Director™ ©2012-2022

Altair® Weld Certification Director™ ©2014-2022

Altair® Multi-Disciplinary Optimization Director™ ©2012-2022

Altair HPC & Cloud Products

Altair® PBS Professional® ©1994-2022

Altair® PBS Works™ ©2022

Altair® Control™ ©2008-2022

Altair® Access™ ©2008-2022

Altair® Accelerator™ ©1995-2022

Altair® Accelerator™ Plus ©1995-2022

Altair® FlowTracer™ ©1995-2022

Altair® Allocator™ ©1995-2022

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Altair Mistral™ ©2022

Altair Drive ©2021-2022

Altair® Grid Engine® ©2001, 2011-2022

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Altair® Knowledge Hub™ ©2017-2022

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Altair® SmartWorks™ ©2021-2022

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Altair One™ ©1994-2022

2022.1

May 12, 2022

Technical Support

Altair provides comprehensive software support via web FAQs, tutorials, training classes, telephone, and e-mail.

Altair One Customer Portal

Altair One (<https://altairone.com/>) is Altair's customer portal giving you access to product downloads, a Knowledge Base, and customer support. We recommend that all users create an Altair One account and use it as their primary portal for everything Altair.

When your Altair One account is set up, you can access the Altair support page via this link:

www.altair.com/customer-support/

Altair Community

Participate in an online community where you can share insights, collaborate with colleagues and peers, and find more ways to take full advantage of Altair's products.

Visit the Altair Community (<https://community.altair.com/community>) where you can access online discussions, a knowledge base of product information, and an online form to contact Support. After you login to the Altair Community, subscribe to the forums and user groups to get up-to-date information about release updates, upcoming events, and questions asked by your fellow members.

These valuable resources help you discover, learn and grow, all while having the opportunity to network with fellow explorers like yourself.

Altair Training Classes

Altair's in-person, online, and self-paced trainings provide hands-on introduction to our products, focusing on overall functionality. Trainings are conducted at our corporate and regional offices or at your facility.

For more information visit: <https://learn.altair.com/>

If you are interested in training at your facility, contact your account manager for more details. If you do not know who your account manager is, contact your local support office and they will connect you with your account manager.

Telephone and E-mail

If you are unable to contact Altair support via the customer portal, you may reach out to technical support via phone or e-mail. Use the following table as a reference to locate the support office for your region.

When contacting Altair support, specify the product and version number you are using along with a detailed description of the problem. It is beneficial for the support engineer to know what type of workstation, operating system, RAM, and graphics board you have, so include that in your communication.

Location	Telephone	E-mail
Australia	+61 3 9866 5557	anzsupport@altair.com

Location	Telephone	E-mail
Brazil	+55 113 884 0414	br_support@altair.com
Canada	+1 416 447 6463	support@altairengineering.ca
China	+86 400 619 6186	support@altair.com.cn
France	+33 141 33 0992	francesupport@altair.com
Germany	+49 703 162 0822	hwsupport@altair.de
Greece	+30 231 047 3311	eesupport@altair.com
India	+91 806 629 4500 +1 800 425 0234 (toll free)	support@india.altair.com
Israel		israelsupport@altair.com
Italy	+39 800 905 595	support@altairengineering.it
Japan	+81 3 6225 5830	support@altairjp.co.jp
Malaysia	+60 32 742 7890	aseansupport@altair.com
Mexico	+52 55 5658 6808	mx-support@altair.com
New Zealand	+64 9 413 7981	anzsupport@altair.com
South Africa	+27 21 831 1500	support@altair.co.za
South Korea	+82 704 050 9200	support@altair.co.kr
Spain	+34 910 810 080	support-spain@altair.com
Sweden	+46 46 460 2828	support@altair.se
United Kingdom	+44 192 646 8600	support@uk.altair.com
United States	+1 248 614 2425	hwsupport@altair.com

If your company is being serviced by an Altair partner, you can find that information on our web site at <https://www.altair.com/PartnerSearch/>.

See www.altair.com for complete information on Altair, our team, and our products.

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This installation guide provides instructions for the Altair Flux & FluxMotor 2022.1 installation on supported platforms.

This installation includes the following Altair Simulation 2022.1 applications:

- Altair Flux
- Altair FluxMotor

where each application makes use of the Altair Units (AUs) licensing system.

The Altair Units licensing allows the Altair License Management (ALM) system to be used if ALM is installed and properly configured. The Altair License Management licensing allows the flexibility to use other Altair Simulation 2022.1 applications.

In order to run Altair Simulation 2022.1 applications, you need to connect the applications to the Altair License Management System 15.0 (or higher, using the latest version is recommended). Details of the installation and how to start the Altair License Manager can be found in the *Altair License Management System 15.0 Installation Guide*. The license packages are available on [Altair Connect](#) or [Altair One Marketplace](#).

Before you install Altair Flux & FluxMotor 2022.1, we recommend that you verify that your computer meets or exceeds the minimum system requirements.

This chapter covers the following:

- [2.1 Supported Operating Systems](#) (p. 11)
- [2.2 Required Hardware Configuration](#) (p. 12)

2.1 Supported Operating Systems

This section presents the operating systems supported by Altair Flux & FluxMotor 2022.1.

Windows

The Altair Flux & FluxMotor installation is for 64-bit Microsoft Windows.

The supported Windows version is:

- Windows 10

Linux

The Altair Flux workstation installation is for 64-bit Linux workstation platforms.

The supported Linux versions are:

- Red Hat Enterprise Linux and CentOS 8.3
- SUSE Linux Enterprise Server 15 SP2



Note: Altair FluxMotor is only supported on Windows operating system.

Support

For all the operating systems mentioned above, Altair provides full technical support.

For all the other ones, Altair will give no guarantee regarding the providing of technical support.

2.2 Required Hardware Configuration

This section presents the hardware configurations required for Altair Flux 2D, Skew, 3D and PEEC & FluxMotor 2022.1.

Processor

The processors required to run Altair Flux 2D, Skew, 3D and PEEC & FluxMotor should have the following characteristics:

Element	Characteristics
Processor	• Intel or AMD • 64 bits • multi-core

Minimum configuration (hard disk and RAM)

The minimum configuration required to run Altair Flux 2D, Skew, 3D and PEEC & FluxMotor are:

	Flux 2D & FluxMotor	Flux Skew/3D	Flux PEEC
Hard disk	250 GiB	500 GiB	50 GiB
RAM	8 GiB	16 GiB	16 GiB

Recommended configuration (hard disk and RAM)

The recommended configuration required to run Altair Flux 2D, Skew, 3D and PEEC & FluxMotor are:

	Flux 2D & FluxMotor	Flux Skew/3D	Flux PEEC
Hard disk	500 GiB	1 TiB	100 GiB
RAM	16 GiB	64 GiB	64 GiB

Graphic card for Altair Flux

The graphic cards required to run Altair Flux 2D, Skew, 3D and PEEC should have the following characteristics:

Element	Characteristics
Graphic card	• OPENGL V2.0 compatible for an optimal graphic quality (see below) • NVIDIA chipset recommended

Altair Flux uses the OPENGL V2.0 graphic technology. This technology provides improved rendering and smoother motion when moving objects.

This technology requires:

- the use of a graphic card **compatible with OPENGL V2.0**
- the latest version of the graphic card driver supplied by the manufacturer

A summary of the conditions of use is presented in the table below:

Conditions of use
Installation of a graphic card compatible with OPENGL V2.0: • NVIDIA GeForce 6200 and higher • ATI Radeon X1300 and higher
Installation of the latest version of the card driver • For NVIDIA: http://www.nvidia.com/page/home.html • For ATI: http://amd.com

 **Warning:** The use of graphic chipsets with shared memory is not recommended.
It is preferable to use graphic chipsets with dedicated memory.

This chapter deals with the installation on Windows of Altair Flux & FluxMotor 2022.1, CDE/CSS and Flux API.

This chapter covers the following:

- [3.1 Altair Flux & FluxMotor Installation](#) (p. 15)
- [3.2 CDE/CSS and Flux API Installation](#) (p. 26)

3.1 Altair Flux & FluxMotor Installation

Introduction

Each version (major and minor) is a completely independent version. It is installed by default in its own directory and is able to coexist with the older versions.

The software installation runs automatically.

Installed components

The automatic installation installs the following components:

- For Altair Flux:
 - The Altair Flux Version 2022.1 software
 - The Altair Flux Version 2022.1 documentation and examples:
 - the documentation in English version: installation guide and user guide,
 - the documentation in French version: user guide,
 - the examples: tutorials and technical papers (in English version only), with the corresponding Flux projects and/or command files.
- For Altair FluxMotor:
 - The Altair FluxMotor Version 2022.1 software

Installation directories

These components are installed:

- by default:
 - with a user account: in the directory `C:\Users\<username>\Altair\2022.1`
 - with an administrator account: in the directory `C:\Program Files\Altair\2022.1`
- or in any other directory specified by the user during the installation*.

In the chosen installation directory:

- For Altair Flux:
 - The Altair Flux 2022.1 software is installed in the sub-directory `flux`.
 - The Altair Flux 2022.1 documentation and examples are installed in the sub-directory `flux\Flux\DocExamples`.
- For Altair FluxMotor:
 - The Altair FluxMotor 2022.1 software is installed in the sub-directory `fluxmotor`.

* The full installation directory path must not include any special characters.

3.1.1 Installation Modes

Different modes

Install Altair Flux & FluxMotor 2022.1 on a machine using either graphical user interface (GUI) mode or silent mode.

The choice of installation modes allows for flexibility in selecting the installation mode that best suits your needs and environment.

GUI mode

The graphical user interface (GUI) mode installation is in the form of a GUI wizard with step-by-step instructions.

Silent mode

A silent mode installation installs Altair Flux & FluxMotor 2022.1 without requiring any user interaction. The installer makes use of a response file that contains the installation options to run the installation from start to end without any user input.

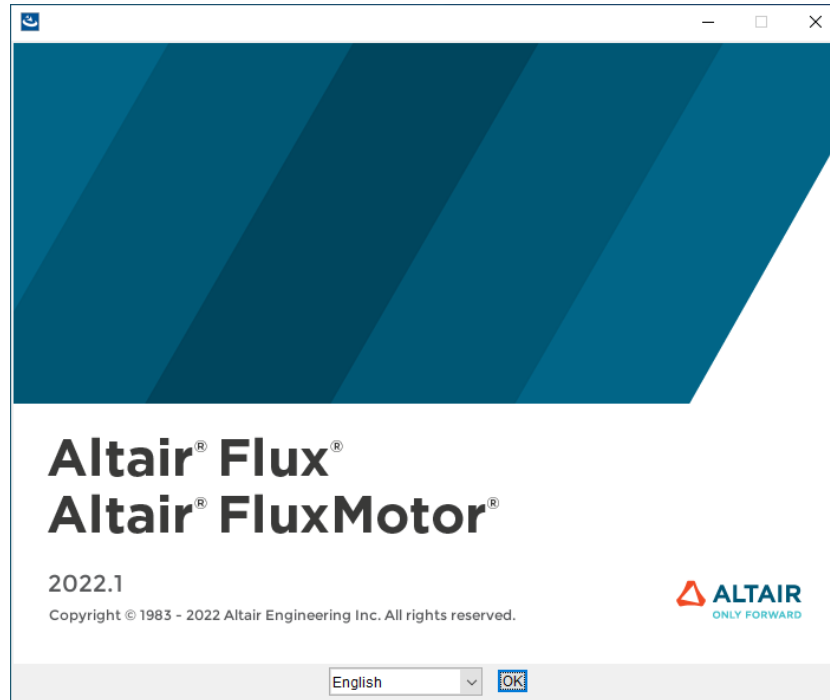
3.1.2 GUI Mode

In order to install Altair Flux & FluxMotor Version 2022.1, follow these instructions:

1. Close all the applications in use
2. Download the Altair Flux & FluxMotor 2022.1 installer: `hwFluxFluxMotor2022.1_win64.exe` from the Altair One site: <https://altairone.com/>

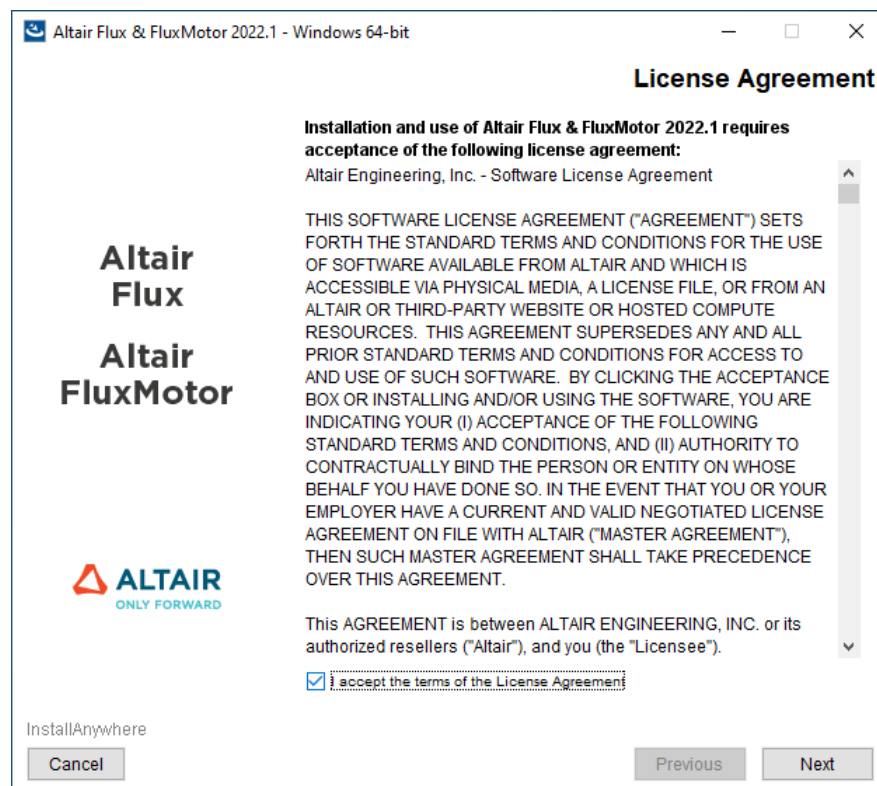
And save it locally

3. Run the executable file `hwFluxFluxMotor2022.1_win64.exe`
4.
 - Select a language
 - Click on the **OK** button

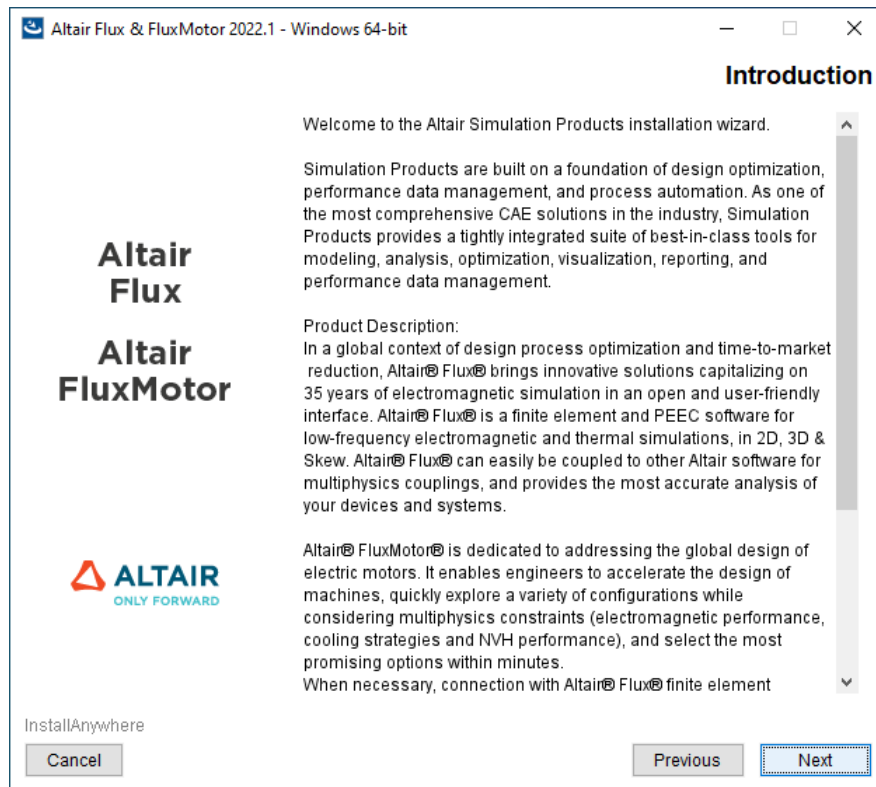


5. In the **Altair Flux & FluxMotor 2022.1 – Windows 64-bit** window (**License Agreement** panel):

- Read through the license agreement and if you accept the terms of the License Agreement, then check the **I accept the terms of the License Agreement** box
- Click on the **Next** button to start with the Altair Flux & FluxMotor 2022.1 installation

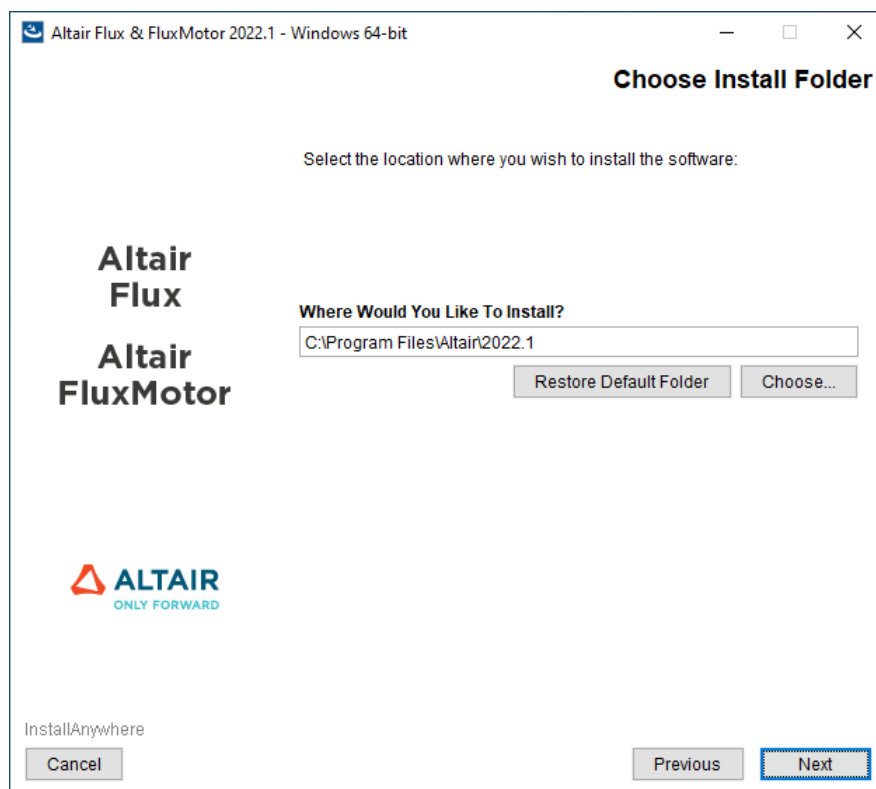


6. In the next **Altair Flux & FluxMotor 2022.1 – Windows 64-bit** window (**Introduction** panel):
- Read the introduction and click on the **Next** button to continue with the Altair Flux & FluxMotor 2022.1 installation



7. In the next Altair Flux & FluxMotor 2022.1 – Windows 64-bit window (Choose Install Folder panel):

- Choose an installation directory:
 - By default:
 - with a user account: the installation directory is C:\Users\<username>\Altair\2022.1
 - with an administrator account: the installation directory is C:\Program Files\Altair\2022.1
 - You can specify another installation directory, however, make sure that the full directory path does not include any special characters, then click on the **Choose** button
- Click on the **Next** button to continue with the Altair Flux & FluxMotor 2022.1 installation



8. In the next **Altair Flux & FluxMotor 2022.1 – Windows 64-bit** window (**Change Shortcut Folder (Local)** panel):

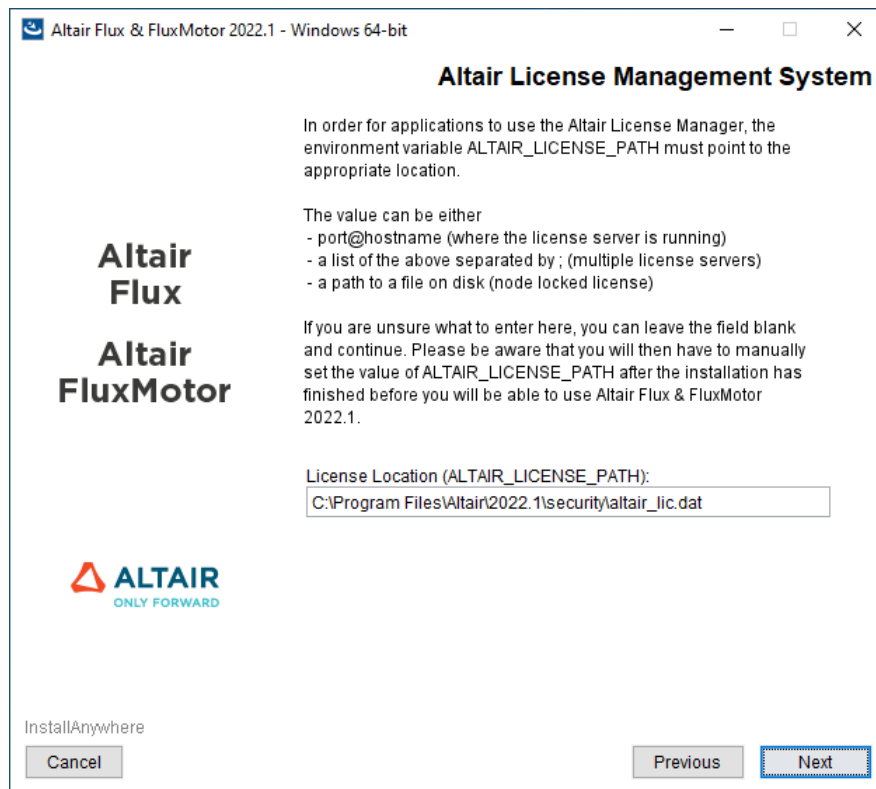
- Specify the folder name that will contain the start menu shortcuts.
- Specify the suffix string to be added to the shortcuts (Optional).
- Select one of the following options:
 - **Yes** if you want to add the Altair Flux & FluxMotor shortcuts on the desktop
 - **No** if you do not want to add the Altair Flux & FluxMotor shortcuts on the desktop
- Click on the **Next** button to continue with the Altair Flux & FluxMotor 2022.1 installation

The screenshot shows the 'Change Shortcut Folder (Local)' panel of the Altair Flux & FluxMotor 2022.1 - Windows 64-bit installation window. The window title bar reads 'Altair Flux & FluxMotor 2022.1 - Windows 64-bit'. The panel contains the following elements:

- Shortcuts Folder Name:** A text box containing 'Altair 2022.1'.
- Shortcut Suffix (will be added to all shortcuts):** A text box containing '2022.1'.
- Would You Like To Install Desktop Shortcuts?:** Radio buttons for 'Yes' and 'No'. The 'No' option is selected.
- Altair Flux and Altair FluxMotor logos:** Large text logos for 'Altair Flux' and 'Altair FluxMotor'.
- ALTAIR logo:** The Altair logo with the tagline 'ONLY FORWARD'.
- InstallAnywhere:** Text at the bottom left.
- Buttons:** 'Cancel', 'Previous', and 'Next' buttons at the bottom. The 'Next' button is highlighted with a blue border.

9. In the next Altair Flux & FluxMotor 2022.1 – Windows 64-bit window (Altair License Management System panel):

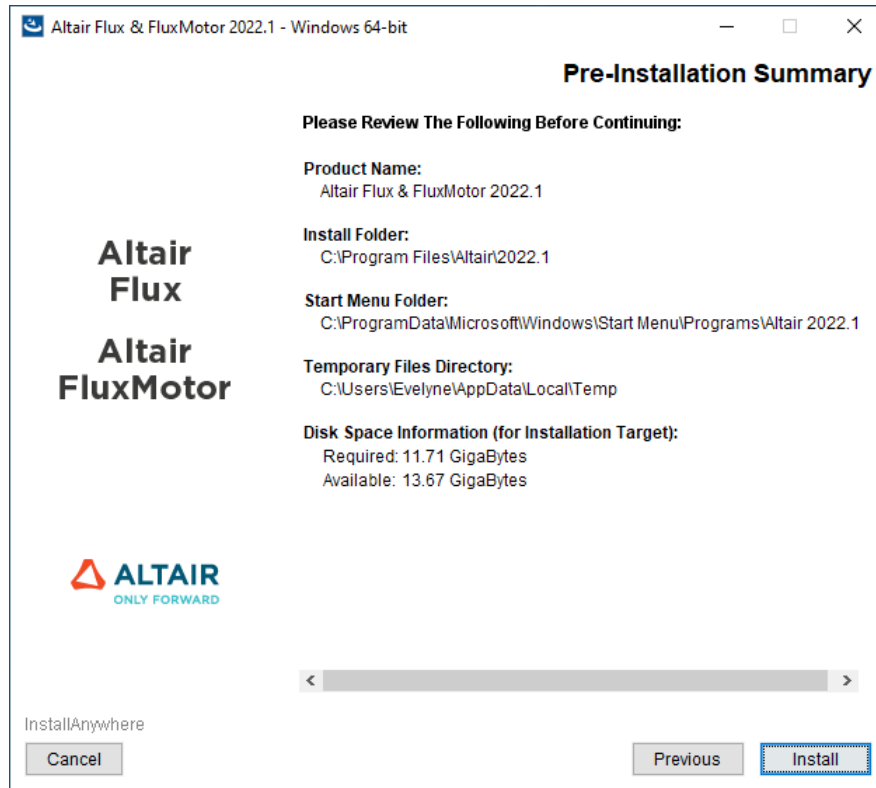
- Enter the license location:
 - If you have a network license, then enter `port@hostname`
where `port` is the TCP/IP port number used by the license server and `hostname` is the name of the license server computer
 - If you have a local license (standalone license), then enter the full pathname of the license file
- Click on the **Next** button to continue with the Altair Flux & FluxMotor 2022.1 installation



 **Note:** This window is only displayed if the license has not yet been configured.

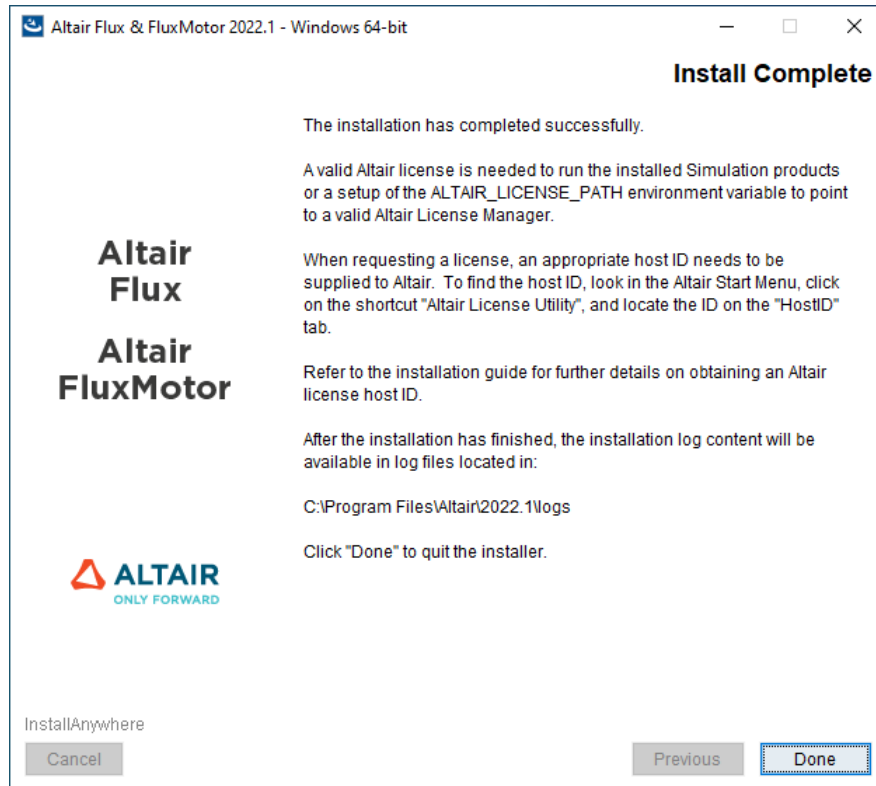
10. In the next **Altair Flux & FluxMotor 2022.1 – Windows 64-bit** window (**Pre-Installation Summary** panel):

- Review the installation details and click on the **Install** button to start the Altair Flux & FluxMotor 2022.1 installation



11. In the last **Altair Flux & FluxMotor 2022.1 – Windows 64-bit** window (**Install Complete** panel):

- Click on the **Done** button to complete the Altair Flux & FluxMotor 2022.1 installation and exit the installer



3.1.3 Silent Mode

Introduction

A silent mode installation installs Altair Flux & FluxMotor 2022.1 without requiring any user interaction. The installer makes use of a response file that contains the installation options to run the installation from start to end without any user input.

Silent Mode

- Create a response file. Run the installer in interactive mode with the `r` option to save the installation properties to a response file.

```
[INSTALLER_NAME] -r "[RESPONSE_PATH]\installer.properties"
```

- Trigger a silent mode installation from the command line using one of the following options:

- Use the default property values as provided by the installer package.

```
[INSTALLER_NAME] -i silent -DACCEPT_EULA=YES
```



Important:

- Setting `-DACCEPT_EULA=YES` means that you accept the terms of the License Agreement and allows you to proceed with Altair Flux & FluxMotor installation
- If nothing is specified for `ACCEPT_EULA` variable or if `-DACCEPT_EULA=NO` then Altair Flux & FluxMotor will not be installed

- Specify properties.

```
[INSTALLER_NAME] -i silent -D[Property]=[VALUE]
```

- For example:

```
-DACCEPT_EULA=YES -DUSER_INSTALL_DIR=C:\\Program Files\\Altair\\2022.1
```

- Use a response file containing properties.

```
[INSTALLER_NAME] -i silent -f "[RESPONSE_PATH]\\installer.properties"
```



Note:

- `[INSTALLER_NAME]` is the installer binary.
- `[RESPONSE_PATH]` is the path where the response file resides.
- Use quotes around directory and pathnames that contain spaces.
- Do not use spaces between `VARIABLE=VALUE` statements in the response file.

Response Files

Introduction

A response file is an installer properties file used to provide properties for an installer running in silent mode. The files contain text in a simple `VARIABLE=VALUE` format.

Response files

The properties in the response files are captured by executing the installer and the captured variables are then used as default values for future silent installs. The installer automatically checks the same directory as the installer for a file called `installer.properties` to use as input to the installer.

An example of a response file containing properties:

```
#Accept License Agreement
#-----
ACCEPT_EULA=YES
#Choose Install Folder
#-----
USER_INSTALL_DIR=C:\\Program Files\\Altair\\2022.1
#Change Shortcut Folder (Local)
#-----
SET_START_MENU_FOLDER=Altair 2022.1
```

```
INSTALL_DESKTOP_SHORTCUTS=0
#Enter License Path Location
#-----
FLUX_ALTAIR_LICENSE_PATH=6200@server.domain
FLUXMOTOR_ALTAIR_LICENSE_PATH=6200@server.domain
```



Note: Spaces should not be used between *VARIABLE=VALUE* statements in the response file.

Response File Properties

General properties

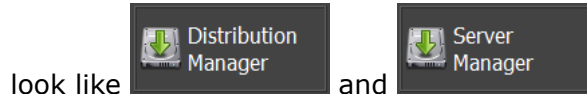
Variable	Definition
<i>ACCEPT_EULA</i>	• YES: You accept the terms of the License Agreement and it allows you to proceed with Altair Flux & FluxMotor installation • NO: You do not accept the terms of the License Agreement and Altair Flux & FluxMotor will not be installed
<i>USER_INSTALL_DIR</i>	The default install folder is C:\Program Files\Altair\2022.1
<i>SET_START_MENU_FOLDER</i>	Specify the name of the start menu folder
<i>INSTALL_DESKTOP_SHORTCUTS</i>	• 0: No shortcuts are created • 1: Shortcuts are created

3.2 CDE/CSS and Flux API Installation

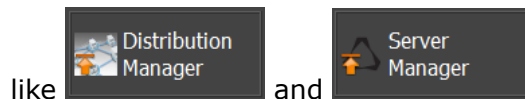
Installation

In order to install CDE/CSS and Flux API, follow these instructions:

1. Run the Flux Supervisor as **administrator**
2. There are two cases:
 - If no previous Altair Flux version has been installed previously on the computer, the buttons

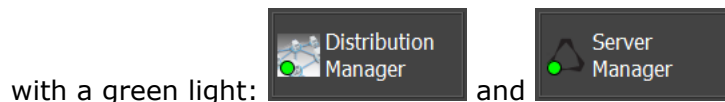


- Click either on the button **Distribution Manager** or **Server Manager**
- If a previous Altair Flux version has already been installed on the computer, the buttons look



- a. Make sure that both services **Cedrat Distribution Server** and **Cedrat Soft Server** are stopped:
 - i. From the **Windows Start** menu, go to: **Control Panel > System and Security > Administrative Tools** and run: **Services**
 - ii. In the **Services** window:
 - Select **Cedrat Distribution Server** then right click and select the **Stop** contextual menu
 - Select **Cedrat Soft Server** then right click and select the **Stop** contextual menu
 - b. Click either on the button **Distribution Manager** or **Server Manager**
3. After a few seconds, the installation is done.

In the Flux Supervisor, you can see each button **Distribution Manager** and **Server Manager**



Notes about CDE

- **Licensing:**
 - **ALTAIR_LICENSE_PATH** environment variable:
Before using CDE, please check that the environment variable for the license: **ALTAIR_LICENSE_PATH** is set as **system** environment variable.

 **Warning:** If **ALTAIR_LICENSE_PATH** is set as user environment variable only, CDE will fail. For CDE to work properly, **ALTAIR_LICENSE_PATH** environment variable must be set as system environment variable.

- For the use of CDE with Hosted Altair Units:

The Hosted Altair Units are linked with the Windows user profile in a way.

So, there are two possibilities to use CDE with Hosted Altair Units:

- **Possibility 1** (which is easier) is to make sure CSS (creating the Flux servers) has the same rights as you do in terms of license. Otherwise it only looks locally for the file or for the environment variable.

So you need to go to **Windows Services** and find **Cedrat Soft Server** (CSS) service. In the **Properties, Log On** tab, you need to use your Windows credentials so that the service runs with your profile.

For this possibility, you do not need to be connected to a given network. It should be your Windows credentials. Then stop/start the CSS service.

- **Possibility 2** is to make sure the token you have from Hosted Altair Units is valid for the whole machine instead of one specific user.

For that, you need to generate a new token and use the given command for **almutil** tool:

```
-hhwuauth      [-system -code <code>]
                Authorize with the Altair Hosted HyperWorks Units system.
                -system will set system-wide authorization.
                -code the authorization code you receive from the web

portal
```

- **User temporary directory %TEMP%:**

(The user temporary directory is by default: C:\Users\<username>\AppData\Local\Temp)

If there are a lot of files in the user temporary directory (according to our tests, "a lot" means more than 50 000 files, but it could be lower or higher on your computer), then CSS and CDE services will not start. In order to fix this issue, please follow the procedure described below:

1. Delete unnecessary temporary files, for instance:

- Using Windows Storage Sense
- Using another tool
- Manually...

2. Restart your computer

3. Reinstall CSS and CDE:

Run as administrator the executable file: Active_Distributed_Computation_and_API.bat

This file is located in the directory: <Installation Directory>\flux\Flux\Bin\prg\win64



Note: For further information on CDE, please refer to the [CDE Quick Start](#).

Installation on Linux (Altair Flux only)

This chapter deals with the installation on Linux of Altair Flux 2022.1 and Flux API.

This chapter covers the following:

- [4.1 Altair Flux Installation](#) (p. 29)
- [4.2 Flux API Installation](#) (p. 39)



Note: Altair FluxMotor is only supported on Windows operating system.

4.1 Altair Flux Installation

Introduction

Each Altair Flux version (major and minor) is a completely independent version. It is installed by default in its own directory and is able to coexist with the older versions.

The software installation runs automatically.

Installed components

The automatic installation installs the following components:

- The Altair Flux Version 2022.1 software
- The Altair Flux Version 2022.1 documentation and examples:
 - the documentation in English version: installation guide and user guide,
 - the documentation in French version: user guide,
 - the examples: tutorials and technical papers (in English version only), with the corresponding Flux projects and/or command files.

Installation directories

These components are installed:

- by default:
 - with an unprivileged account: in the directory `/home/<username>/2022.1`
 - with the root account: in the directory `/root/2022.1`
- or in any other directory specified by the user during the installation*.

In the chosen installation directory:

- The Altair Flux 2022.1 software is installed in the sub-directory `altair/flux`.
- The Altair Flux 2022.1 documentation and examples are installed in the sub-directory `altair/flux/Flux/DocExamples`.

* The full installation directory path must not include any special characters.

4.1.1 Installation Modes

Different modes

Install Altair Flux 2022.1 on a machine using either graphical user interface (GUI) mode, console mode or silent mode.

The choice of installation modes allows for flexibility in selecting the installation mode that best suits your needs and environment.

GUI mode

The graphical user interface (GUI) mode installation is in the form of a GUI wizard with step-by-step instructions.

Console mode (only supported on Linux)

A console mode installation process mimics the default GUI wizard steps, but uses only the standard input and output. Console mode allows for text to be output to the console.

Silent mode

A silent mode installation installs Altair Flux 2022.1 without requiring any user interaction. The installer makes use of a response file that contains the installation options to run the installation from start to end without any user input.

4.1.2 GUI Mode

In order to install Altair Flux Version 2022.1, follow these instructions:

1. Close all the applications in use
2. Download the Altair Flux 2022.1 installer: `hwFlux2022.1_linux64.bin`
from the Altair One site: <https://altairone.com/>

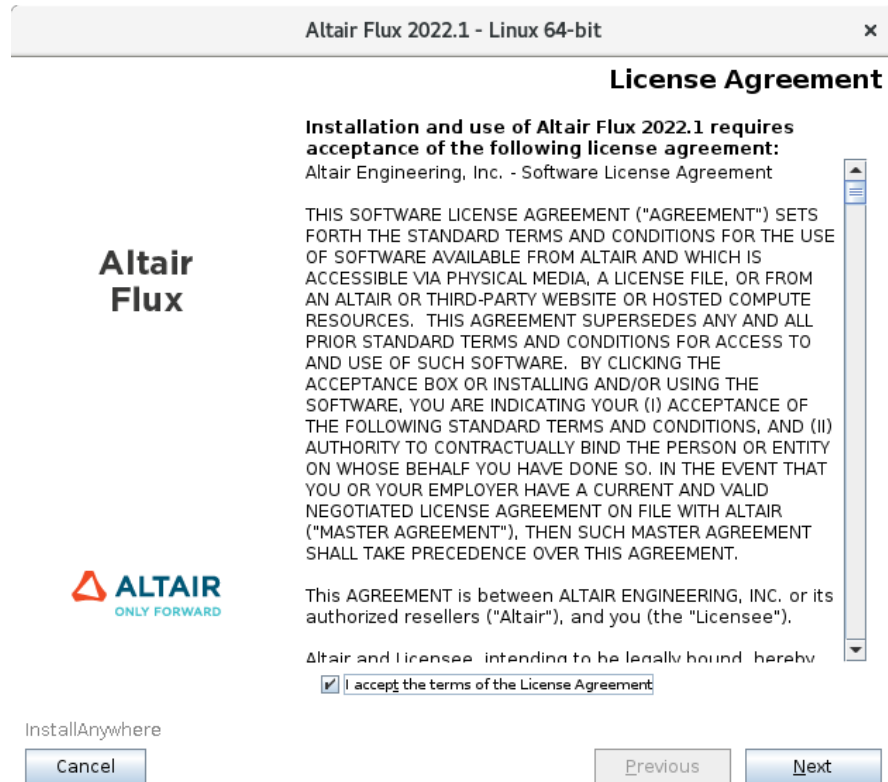
And save it locally

3. Execute the file `hwFlux2022.1_linux64.bin`
4.
 - Select a language
 - Click on the **OK** button



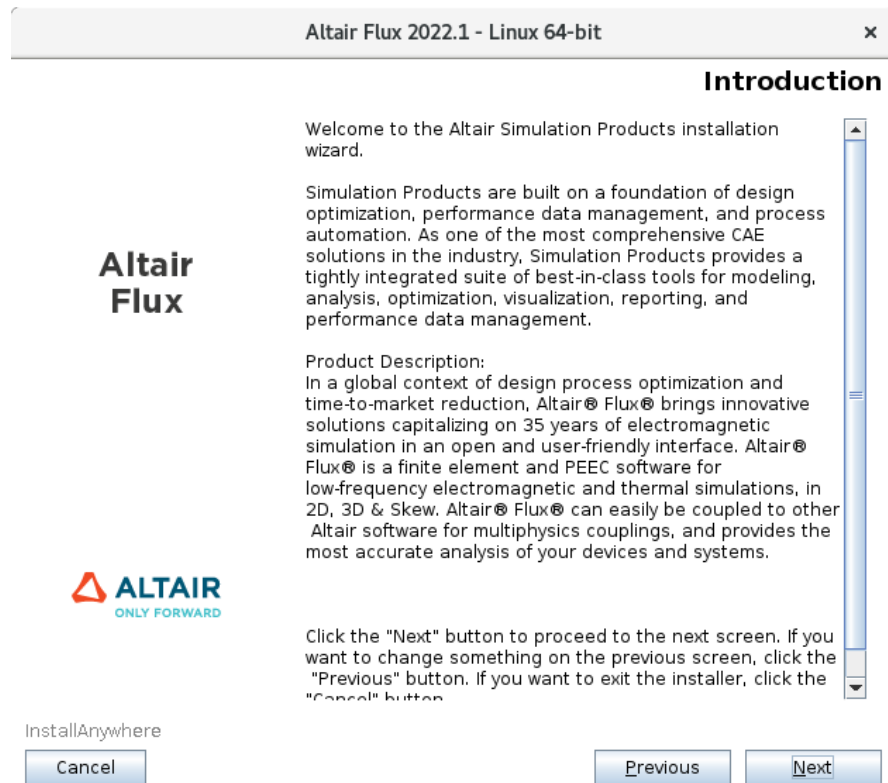
5. In the **Altair Flux 2022.1 – Linux 64-bit** window (**License Agreement** panel):

- Read through the license agreement and if you accept the terms of the License Agreement, then check the **I accept the terms of the License Agreement** box
- Click on the **Next** button to start with the Altair Flux 2022.1 installation



6. In the next **Altair Flux 2022.1 – Linux 64-bit** window (**Introduction** panel):

- Read the introduction and click on the **Next** button to continue with the Altair Flux 2022.1 installation



7. In the next **Altair Flux 2022.1 – Linux 64-bit** window (**Choose Install Folder** panel):

- Choose an installation directory:
 - By default:
 - with an unprivileged account: the installation directory is `/home/<username>/2022.1`
 - with the root account: the installation directory is `/root/2022.1`
 - You can specify another installation directory, however, make sure that the full directory path does not include any special characters, then click on the **Choose** button
- Click on the **Next** button to continue with the Altair Flux 2022.1 installation



8. In the next **Altair Flux 2022.1 – Linux 64-bit** window (**Pre-Installation Summary** panel):
- Review the installation details and click on the **Install** button to start the Altair Flux 2022.1 installation



9. In the last **Altair Flux 2022.1 – Linux 64-bit** window (**Install Complete** panel):

- Click on the **Done** button to complete the Altair Flux 2022.1 installation and exit the installer



4.1.3 Console Mode (only supported on Linux)

Introduction

A console mode installation process mimics the default GUI wizard steps, but uses only the standard input and output. Console mode allows for text to be output to the console.



Note:

- Installing Altair Flux using console mode is only supported on Linux.
- If the terminal does not have any GUI/X capabilities (such as a pure SSH terminal session), launching the installer without any additional options will automatically start the console mode.

Console mode

Trigger a console mode installer from the command line by appending the following command parameter to the installer:

```
-i console
```

Procedure

In order to use the console mode, open a command terminal:

1. Change directory to the location where the installer resides with the `cd` command
2. Execute the `sh` command on the installer binary where `[INSTALLER_NAME]` is the installer binary with the additional command parameter:

```
sh [INSTALLER_NAME] -i console
```

4.1.4 Silent Mode

Introduction

A silent mode installation installs Altair Flux 2022.1 without requiring any user interaction. The installer makes use of a response file that contains the installation options to run the installation from start to end without any user input.

Silent Mode

1. Create a response file. Run the installer in interactive mode with the `r` option to save the installation properties to a response file.

```
[INSTALLER_NAME] -r "[RESPONSE_PATH]\installer.properties"
```

2. Trigger a silent mode installation from the command line using one of the following options:
 - Use the default property values as provided by the installer package.

```
[INSTALLER_NAME] -i silent -DACCEPT_EULA=YES
```



Important:

- Setting `-DACCEPT_EULA=YES` means that you accept the terms of the License Agreement and allows you to proceed with Altair Flux installation
- If nothing is specified for `ACCEPT_EULA` variable or if `-DACCEPT_EULA=NO` then Altair Flux will not be installed

- Specify properties.

```
[INSTALLER_NAME] -i silent -D[Property]=[VALUE]
```

- For example:

```
-DACCEPT_EULA=YES -DUSER_INSTALL_DIR=/home/<username>/2022.1/altair
```

- Use a response file containing properties.

```
[INSTALLER_NAME] -i silent -f "[RESPONSE_PATH]\installer.properties"
```



Note:

- [INSTALLER_NAME] is the installer binary.
- [RESPONSE_PATH] is the path where the response file resides.
- Use quotes around directory and pathnames that contain spaces.
- Do not use spaces between *VARIABLE=VALUE* statements in the response file.

Response Files

Introduction

A response file is an installer properties file used to provide properties for an installer running in silent mode. The files contain text in a simple *VARIABLE=VALUE* format.

Response files

The properties in the response files are captured by executing the installer and the captured variables are then used as default values for future silent installs. The installer automatically checks the same directory as the installer for a file called `installer.properties` to use as input to the installer.

An example of a response file containing properties:

```
#Accept License Agreement
#-----
ACCEPT_EULA=YES
#Choose Install Folder
#-----
USER_INSTALL_DIR=/home/<username>/2022.1/altair
#Change Shortcut Folder (Local)
#-----
SET_START_MENU_FOLDER=Altair 2022.1
INSTALL_DESKTOP_SHORTCUTS=0
#Enter License Path Location
#-----
FLUX_ALTAIR_LICENSE_PATH=6200@server.domain
```



Note: Spaces should not be used between *VARIABLE=VALUE* statements in the response file.

Response File Properties

General properties

Variable	Definition
<i>ACCEPT_EULA</i>	• YES: You accept the terms of the License Agreement and it allows you to proceed with Altair Flux installation • NO: You do not accept the terms of the License Agreement and Altair Flux will not be installed
<i>USER_INSTALL_DIR</i>	The default install folder is /home/<username>/2022.1/altair
<i>SET_START_MENU_FOLDER</i>	Specify the name of the start menu folder
<i>INSTALL_DESKTOP_SHORTCUTS</i>	• 0: No shortcuts are created • 1: Shortcuts are created

4.2 Flux API Installation

In order to install Flux API, follow these instructions:

1. Open a Terminal
2. Run the command: `<Install.dir.>/altair/flux/Flux/Bin/prg/lin64/Activate_API.bash`
3. The last message should be: `Installation successful`

In order to uninstall Altair Flux & FluxMotor 2022.1, please refer to the [Altair Simulation Quick Installation Guide](#).