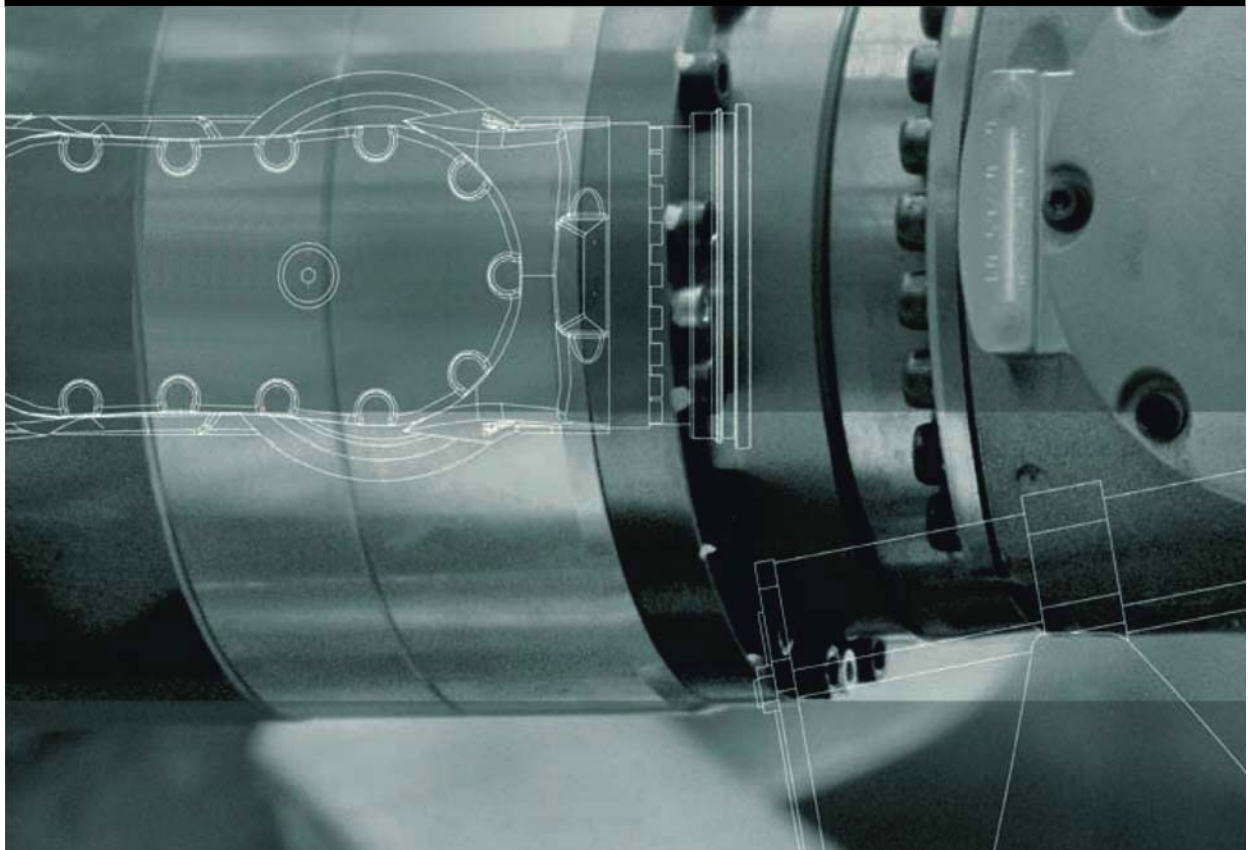


KUKA.Sim 2.2

Installation and Licensing



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Other functions not described in this documentation may be operable in the controller. The user has no claims to these functions, however, in the case of a replacement or service work.

We have checked the content of this documentation for conformity with the hardware and software described. Nevertheless, discrepancies cannot be precluded, for which reason we are not able to guarantee total conformity. The information in this documentation is checked on a regular basis, however, and necessary corrections will be incorporated in the subsequent edition.

Subject to technical alterations without an effect on the function.

Translation of the original documentation

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1 Introduction


1.1 Representation of warnings and notes


Safety


These warnings are relevant to safety and **must** be observed.

 **DANGER** These warnings mean that it is certain or highly probable that death or severe injuries **will** occur, if no precautions are taken.


 **WARNING** These warnings mean that death or severe injuries **may** occur, if no precautions are taken.

 **CAUTION** These warnings mean that minor injuries **may** occur, if no precautions are taken.

 **NOTICE** These warnings mean that damage to property **may** occur, if no precautions are taken.


 These warnings contain references to safety-relevant information or general safety measures.
These warnings do not refer to individual hazards or individual precautionary measures.

This warning draws attention to procedures which serve to prevent or remedy emergencies or malfunctions:

 **SAFETY INSTRUCTIONS** Procedures marked with this warning **must** be followed exactly.

Notes

These hints serve to make your work easier or contain references to further information.

 Tip to make your work easier or reference to further information.

2 Product description

2.1 Product description

The KUKA.Sim product family consists of three programs:

KUKA.Sim Layout KUKA.Sim Layout is a program for creating 3D layouts with KUKA robots. It makes it possible to create different layouts, drafts and robot tasks quickly and easily and compare them with each other. With its extensive component library and Plug&Play functionality, it is the ideal simulation software for sales teams for producing concept studies and reachability analyses without cycle time specifications.

KUKA.Sim Tech KUKA.Sim Tech comprises the functionality of KUKA.Sim Layout together with an additional application programming interface (API). This interface enables other COM development environments (e.g. VBA or C++) to trigger and influence the simulation in different ways (e.g. starting and controlling).

CAD importers are available as an option. This requires a purchasable license for each import interface.

KUKA.Sim Pro KUKA.Sim Pro is used for the complete offline programming of KUKA robots. This product allows the analysis of cycle times and the generation of robot programs. It also enables a real-time connection to the virtual KUKA robot controller (KUKA.OfficeLite). KUKA.Sim Pro is additionally used for building parametric components and defining kinematic systems, which can also be used in KUKA.Sim Layout and KUKA.Sim Tech. KUKA.OfficeLite is included in the KUKA.Sim Pro package.

CAD importers are available as an option. This requires a purchasable license for each import interface.

3 Installation

3.1 Minimum requirements for hardware

KUKA.Sim Layout The minimum requirements for the computer are a 2 GHz CPU and 1 GB RAM, and an OpenGL-capable graphics card with at least 256 MB RAM and a resolution of 1024 x 768 pixels or a similarly specified notebook.

Supported operating systems are WIN XP - 32-bit or WIN 7 - 32/64-bit.

KUKA.Sim Tech / KUKA.Sim Pro The minimum requirements for the computer are a 2 GHz CPU and 2 GB RAM, and an OpenGL-capable graphics card with at least 512 MB RAM and a resolution of 1024 x 768 pixels or a similarly specified notebook.

Supported operating systems are WIN XP - 32-bit or WIN 7 - 32/64-bit.

KUKA.OfficeLite For use of KUKA.OfficeLite, please note:

- KR C2 >> WinXP SP3 (32-bit)
- KR C4 >> Win7 (64-bit)

3.2 General

Internet access and an e-mail address are required to activate the product.

KUKA.Sim Layout >> SetupKUKASimLayout_2.2.x.exe

KUKA.Sim Tech >> SetupKUKASimTech_2.2.x.exe

KUKA.Sim Pro >> SetupKUKASimPro_2.2.x.exe

KUKA.Sim Komponentenbibliothek >> SetupKUKASimLibrary_2.2.x.exe



The component library can only be installed if a KUKA.Sim product is installed.

Administrator or installation rights are required for installing the software.

3.3 Installing the software



The following illustrations show the installation procedure for KUKA.Sim Pro. The installation procedure for KUKA.Sim Layout and KUKA.Sim Tech is comparable with that for KUKA.Sim Pro.

Installation of KUKA.Sim

Start the setup file ".exe"



Fig. 3-1

Read the agreement and activate the check box "I accept ..."



Fig. 3-2

Select "Install" to start installation

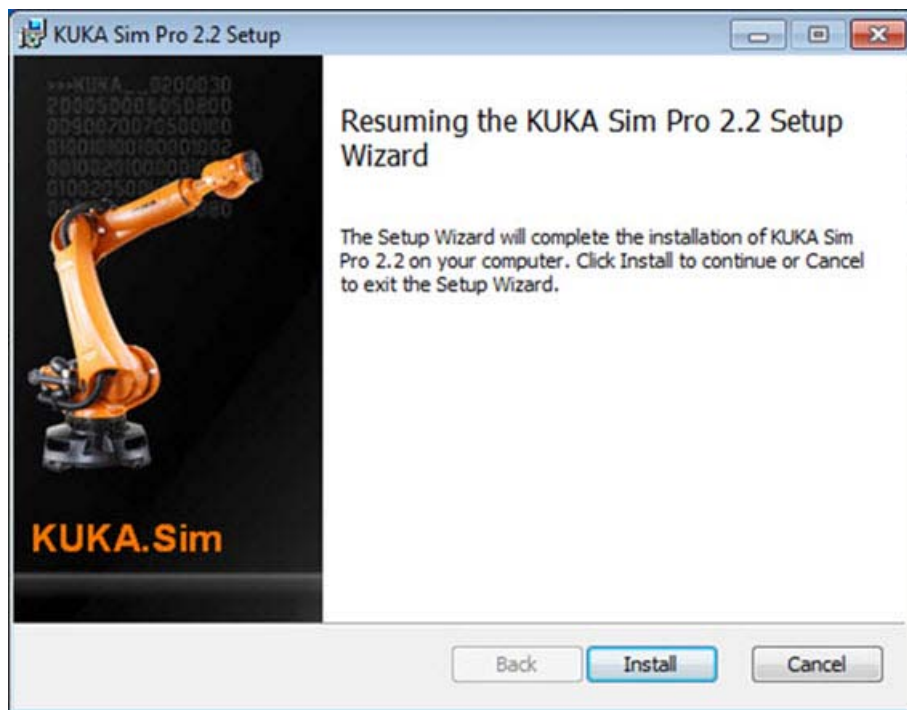


Fig. 3-3

Select “Install” to complete installation

Installing the component library

The latest library is freely available in the download area under www.kuka-sim.com.

The KUKA.Sim component library contains over 1,000 typical layout components (robots, grippers, fences, etc.), various demo layouts and tutorials for KUKA.Sim. Although the KUKA.Sim products still work without the component library installed, it is strongly recommended that the component library is installed in order to be able to create layouts quickly and easily.

After installation of the KUKA.Sim software product, the component library is installed with the following program: SetupKUKASimLibrary_2.2.0_Buildx.exe

The procedure is very similar to the installation of the software products. Simply follow the instructions given.

Installation of KUKA.OfficeLite

Follow the instructions on the DVD for KUKA.OfficeLite.



KUKA OfficeLite is only supplied together with KUKA.Sim Pro, not with the other products.

Administrator or installation rights are required for installing the software.

In the case of the installation files for KUKA.OfficeLite, there is also documentation provided, including a description of the installation and licensing procedure to be observed.

4 Licensing

4.1 Overview

- License key
- License types:
 - Stand-alone license
 - Network license
- Renewal and deactivation

4.2 License key

The license key must be requested from simulation@kuka-roboter.de.

The following information is required for processing the request:

- KUKA contract number / order number
- Product type: KUKA.Sim Layout / KUKA.Sim Tech / KUKA.Sim Pro
- Stand-alone license / server license / number of licenses
- Your contact data (e.g. e-mail signature)

4.3 License types

- Stand-alone license:

The license is on the PC on which KUKA.Sim is used. The license key is then valid for this PC only. It can also be transferred to a different PC.
- Network license:

The license is assigned by a license server.
A license server must be set up which can be accessed across the network by the PC on which KUKA.Sim is installed.

4.4 Stand-alone license

KUKA.Sim is activated after installation. The product key must be requested as described under (>>> 4.2 "License key" Page 13).

The license is on the PC on which KUKA.Sim is used. The license key is then valid for this PC only. The license key is then valid for this PC only. It can also be transferred to a different PC. For a speedy transfer, Internet access is required.

Selection of the license type: "Stand-alone license":



Fig. 4-1

Then enter the license key:



Fig. 4-2

Complete the licensing procedure with "Next".

4.5 CAD interfaces

CAD importers are available as an option. This requires a purchasable license for each importer.

The CAD licenses are **only** available as network licenses.

Licensing is performed as described in Section (>>> 4.6 "Network license" Page 15).

4.6 Network license

Network licenses provide a flexible way of using KUKA.Sim on more than one PC. When a license is requested by a PC, this license is then allocated to this PC. When KUKA.Sim is closed, the license becomes available again and can be accessed by another PC.

A license server is required to manage the network licenses.

Precondition

The license server can be installed on any available network PC running Windows XP or higher. It is recommended that installation is performed with administrator privileges. "Microsoft Management Console" (MMC) should be installed on the license server. The software can be downloaded from the Microsoft website. In addition, ".NET framework 3.5" or higher should be installed.

4.6.1 Installing the license server

Installation is started by double-clicking on "SetupVCLicenseServer.msi". Follow the installation instructions.



Fig. 4-3

The software is installed by default under "C:\Program Files\VisualComponents\VisualComponentsLicenseServer". If the installation path is changed, the memory requirement should be checked:

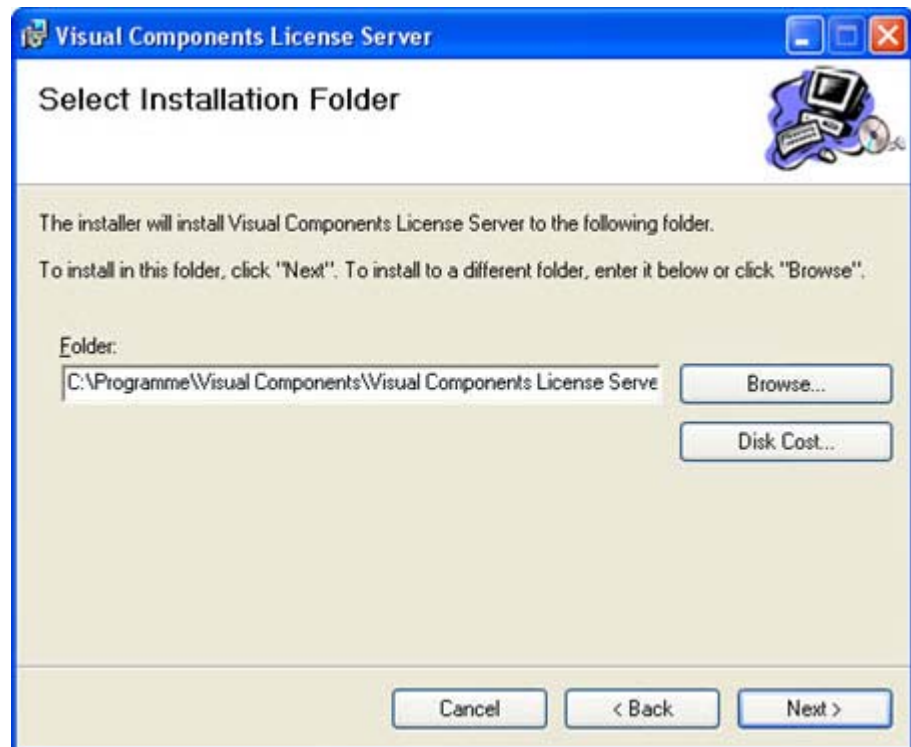


Fig. 4-4

In the following window, start installation with "Next".

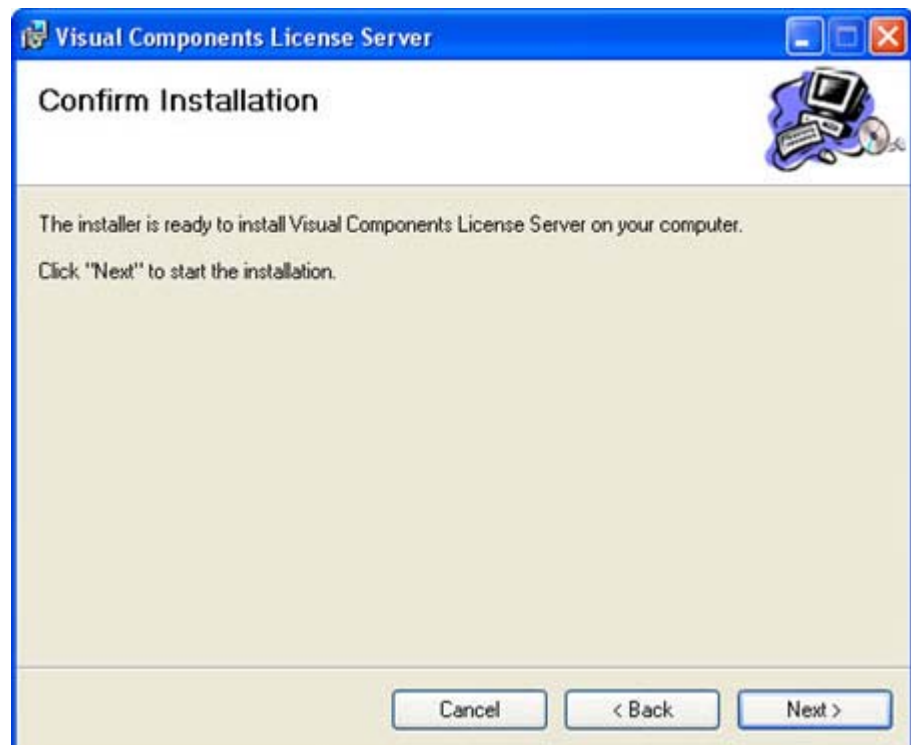


Fig. 4-5

In the following window, complete the installation procedure with "Close".

4.6.2 License server settings

The license server is started via “Start > Programs > Visual Components > Visual Components License Server > Visual Components License Server Manager”.

The following window appears:

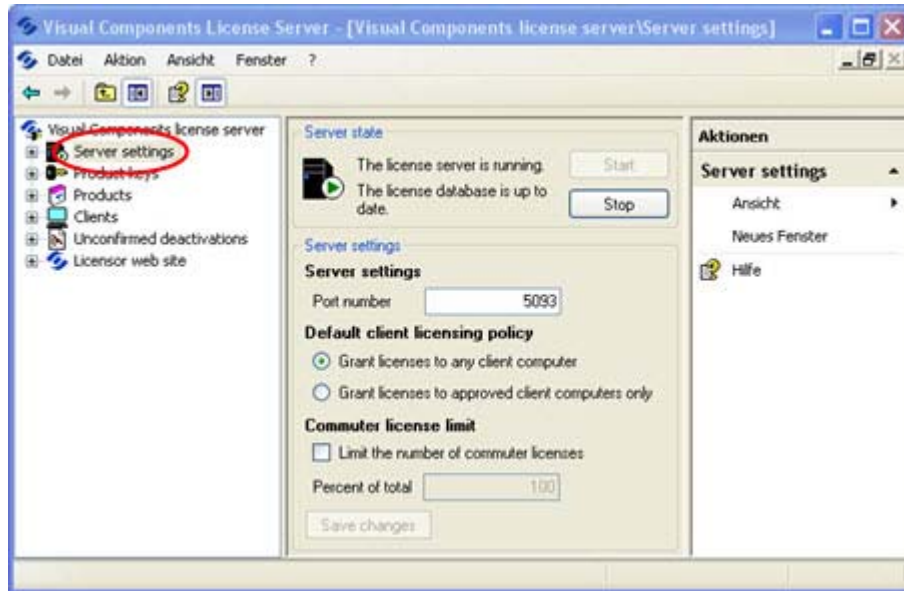


Fig. 4-6

i This area shows whether the **license server is started**. If the “Start” button is highlighted in black, then click on this button to start the license server.

- The **Port number 5093** is assigned.
- **Commuter license limit** makes it possible to specify what percentage of the licenses may be checked out.

On the left-hand side, select “Product keys” in order to enter the license key.

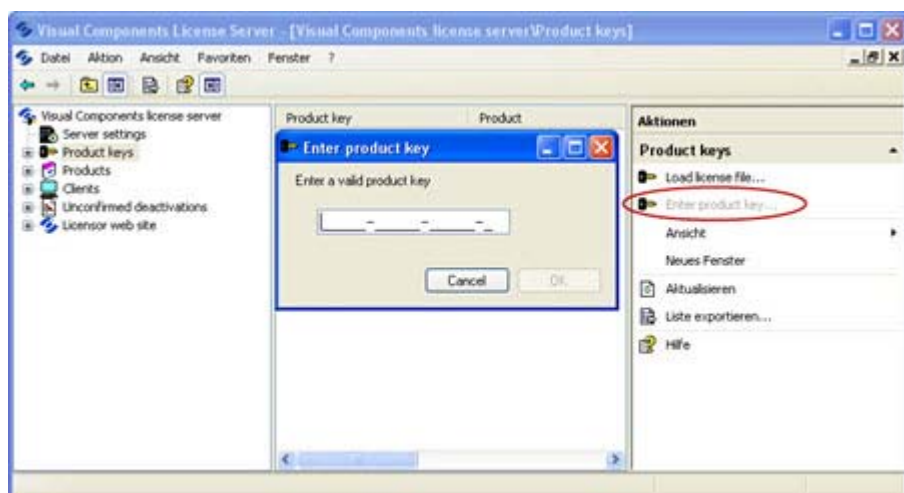


Fig. 4-7

- The right-hand side changes and “Enter product key...” is offered. Click on this.
- A window is opened in the center, in which the license key can be entered.

- If manual licensing is being performed using a license file, this license file must be loaded with “Load license file...”.

Enter the license key and confirm with OK.

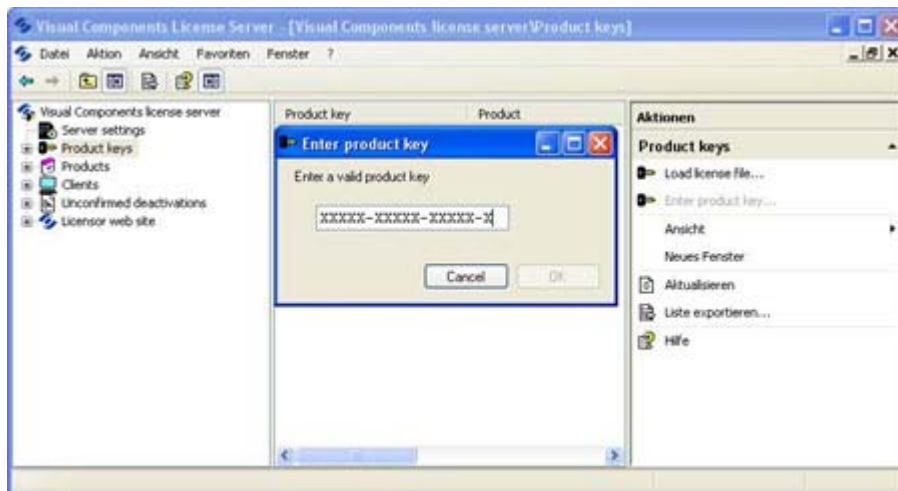


Fig. 4-8

4.6.3 Local network license

Selection of the license type: “Local network license”



Fig. 4-9

After starting the software for the first time, the server license must be set up. Select “Floating License” in the following window.

After this, enter the server name (Serverhost) and the port (5093) of the license server. Request the missing information from the responsible administrator.

After successful confirmation of licensing, KUKA.Sim can be used. For the period of use, the license is blocked and cannot be used by another PC.

4.7 License file

A license file is used if KUKA.Sim is installed on a PC which has no Internet connection.

When using the license file, the following procedure must be observed:

- Request a license key from KUKA Roboter GmbH (simulation@kuka-roboter.de)
 - The e-mail should specify the product designation and order number (>>> 4.2 "License key" Page 13).
- Install the KUKA.Sim product on the desired PC.
- Start KUKA.Sim and enter the license key.
- Select "Activate manually" and save the request file.
- Request the license file on a PC with Internet access.
Internet link: <https://portal.visualcomponents.net/website/kuka>
- Save the license file (.dat) on the KUKA.Sim PC and continue with the licensing procedure (>>> 4.7.2 "Using a license file" Page 21).
- Complete the licensing procedure >> KUKA.Sim is started.

4.7.1 Requesting a license file

The license file can be created on the following website:

Internet link: <https://portal.visualcomponents.net/website/kuka>

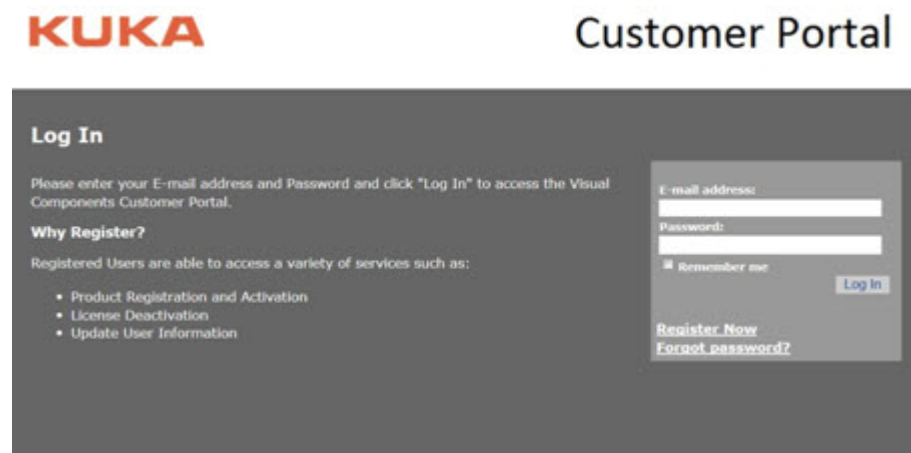


Fig. 4-10

Log in with your e-mail address, or perform registration first.

Select "Manual Licensing":

KUKA

Customer Portal



Fig. 4-11

Browse for the "request file" and select "Upload".

KUKA

Customer Portal



Fig. 4-12

Click on "Confirm" to create the license file.

KUKA

Customer Portal

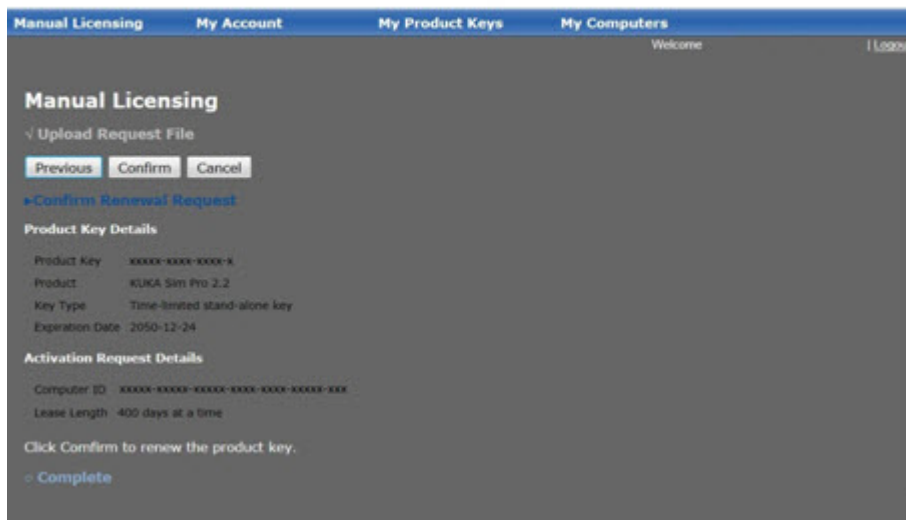


Fig. 4-13

Save the license (.dat) file using "Click to Download" and complete the procedure with "Finish":

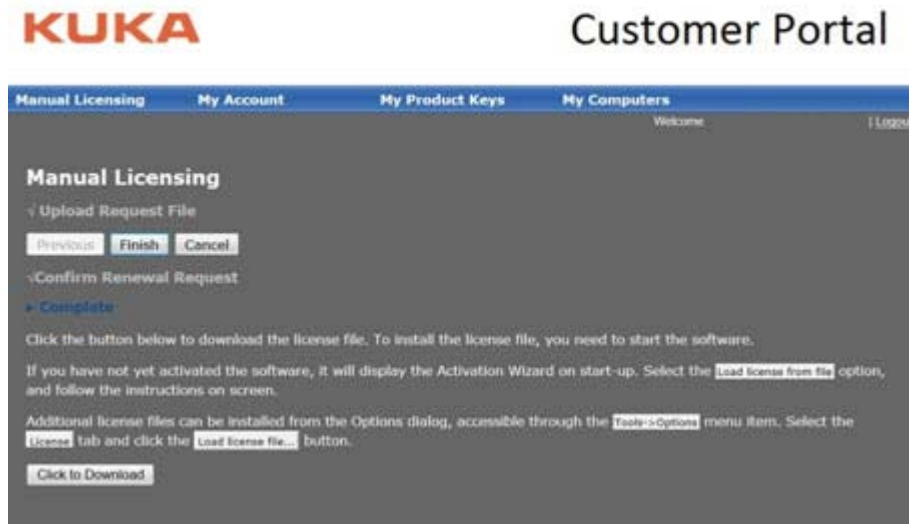


Fig. 4-14

4.7.2 Using a license file

Save the license (.dat) file on the KUKA.Sim PC.

Selection of the license type: "Load license from file"



Fig. 4-15

After selection, the path of the license (.dat) file must be specified.

Finally, complete the licensing procedure.

4.8 License renewal and deactivation

i After activation, the license is valid for 400 days. Renewal can be carried out at any time.

Renewal and deactivation of the license is carried out in the menu bar under Tools / Options:

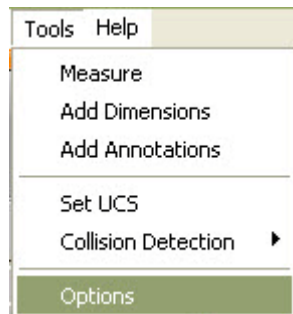


Fig. 4-16

All entered licenses are listed on the “Lizenzen” tab (1):

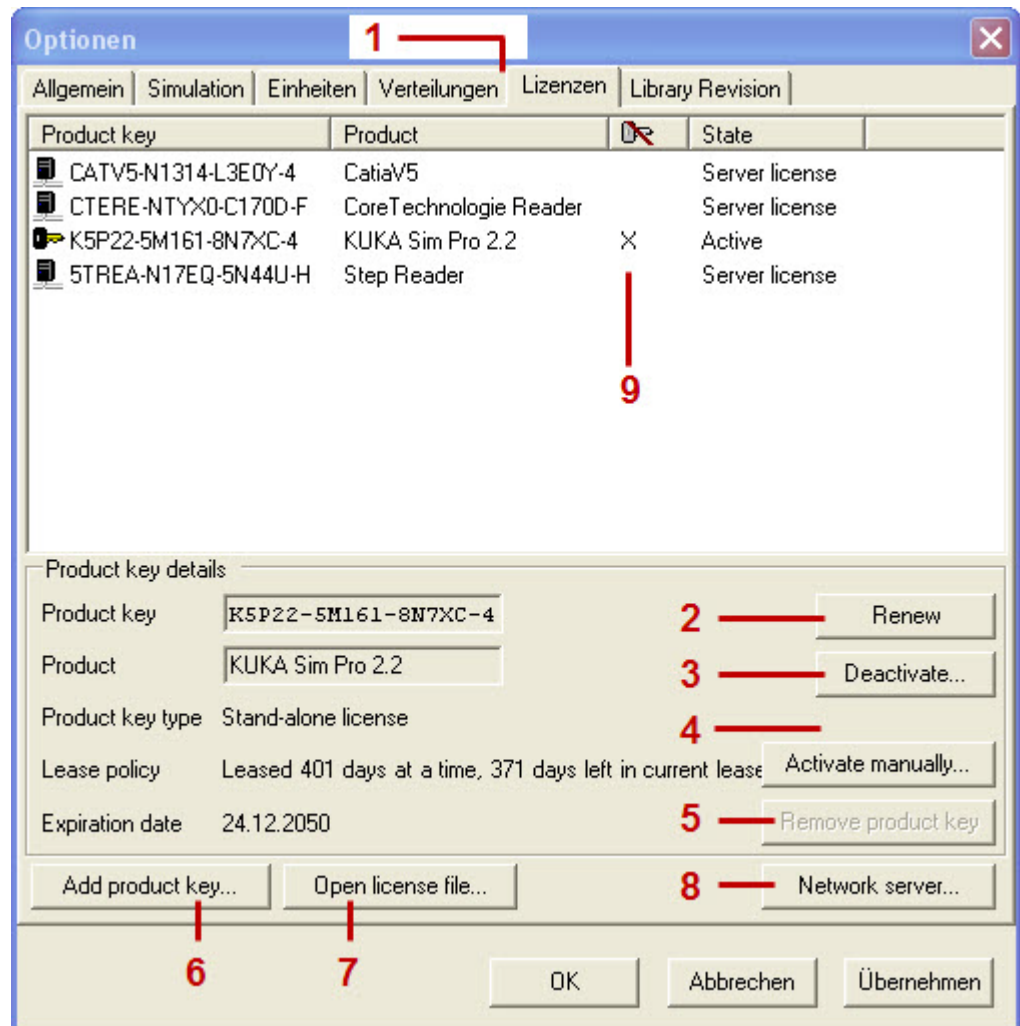


Fig. 4-17

2 - “Renew”

If an Internet connection is available, this can be used to renew the license. The activation period is reset to 400 days.

3 - “Deactivate...”

If an Internet connection is available, the license can be deactivated online.

If no Internet connection is available, a file can be generated manually in order to be able to carry out deactivation via another PC.

The procedure for manual deactivation is similar to that for manual activation >> see Section “KUKA.Sim 2.2 Requesting a license file”.

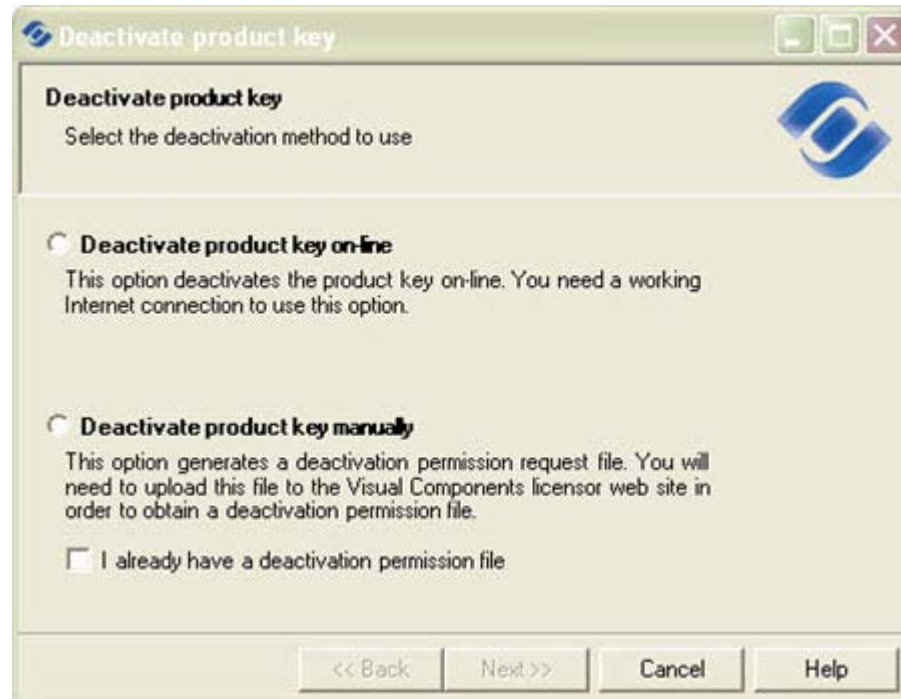


Fig. 4-18

4 - “Activate manually...”

If no Internet connection is available, a file can be generated manually in order to be able to carry out activation via another PC >> see Section “KUKA.Sim 2.2 Requesting a license file”.

Link: <https://portal.visualcomponents.net/website/kuka>

5 - “Remove product key”

Removes a product key from the list.

6 - “Add product key...”

Adds a new product key to the list.

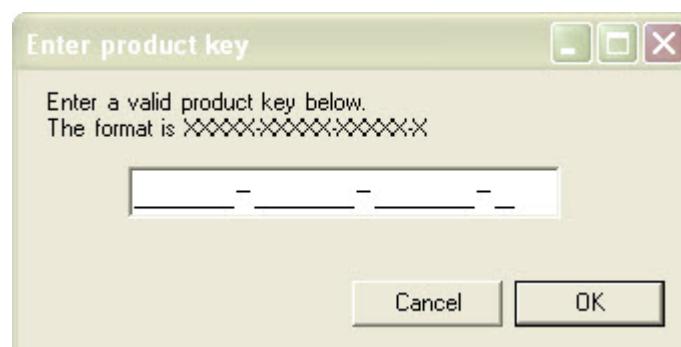


Fig. 4-19

7 - “Open license file...”

Opens a license file.

8 - "Network server..."

The license server can be specified and activated here.

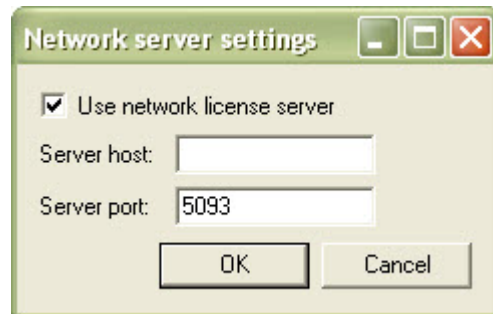


Fig. 4-20

Server host: <Enter PC name>

Server port: 5093

Note:

At first installation on the license server, the server port 5093 must be activated as UDP in the Windows firewall.

In Windows7, the setting must be made under Control Panel\All Control Panel Items\Windows Firewall >> Advanced Settings >> Inbound Rules and Outbound Rules.

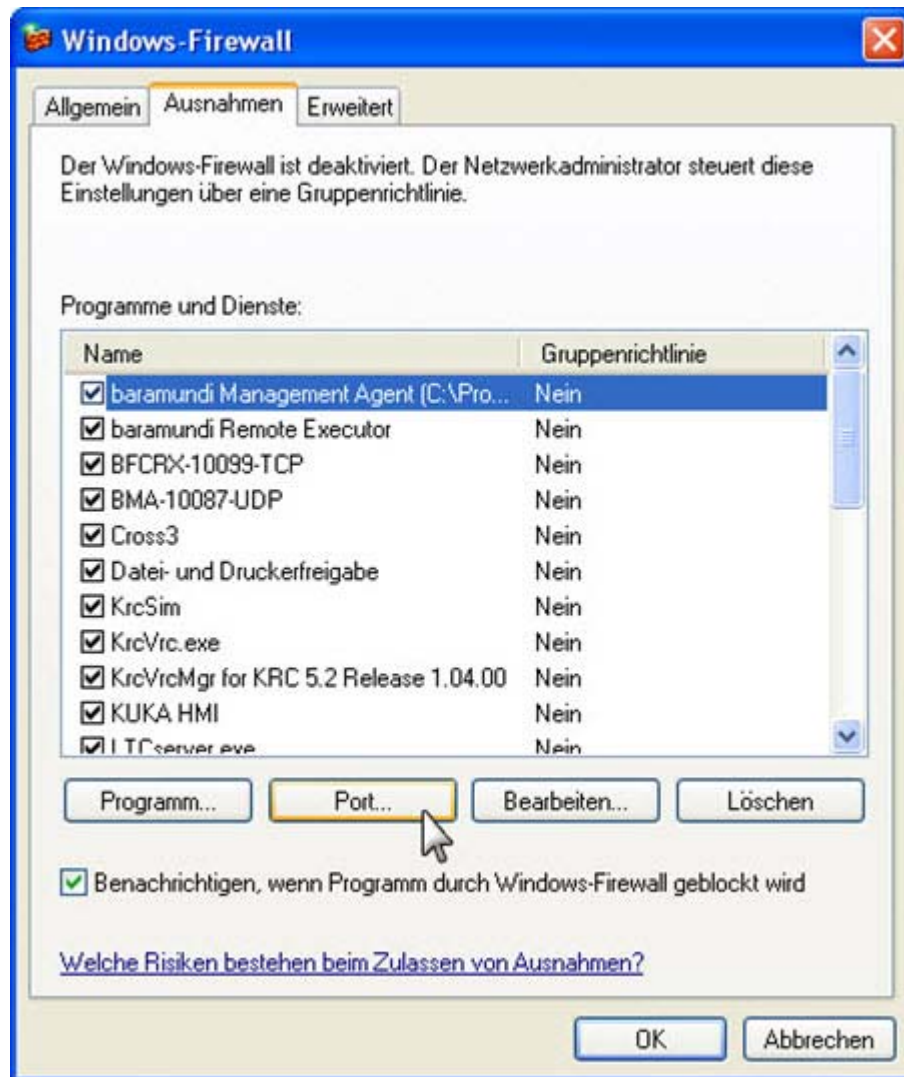


Fig. 4-21

Click on "Port..." to open the following window.

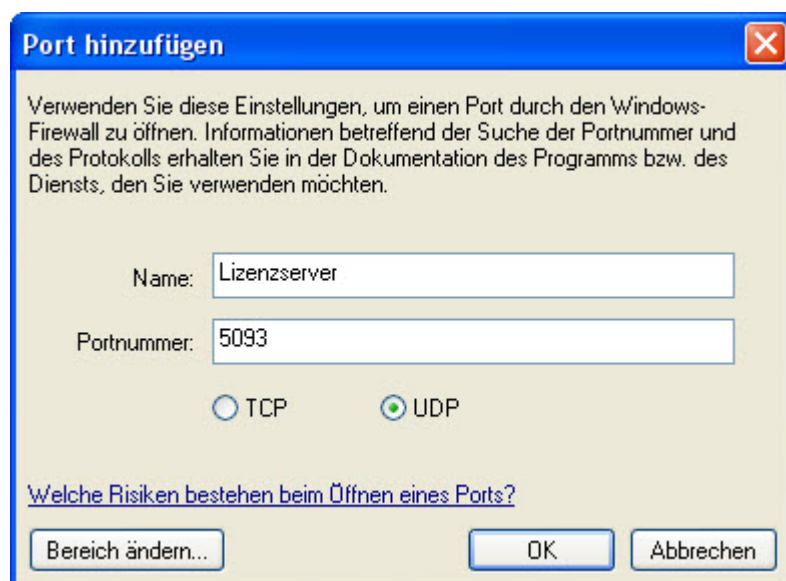


Fig. 4-22

The name can be freely selected. "License server" is entered here by way of example.

The port number must be 5093, the option “UDP” must be selected.

9 - “X”

All licenses marked with an “X” can be transferred.

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