

## **Femap v2022.x - Operating Systems and Minimum Hardware Requirements**

### **Important Notes Regarding Operating Systems Support**

**Femap versions v11.1.x through v2022.x require a 64 bit Windows OS.**

**Femap version 2019.1 was the final release that is supported on Windows 7.**

**Please see: <https://www.microsoft.com/en-us/windowsforbusiness/end-of-windows-7-support>**

**Femap v11.1.0 was the last supported release of 32-bit Femap and on the Windows XP and Windows Vista operating systems.**

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Femap Supported Operating Systems and Minimal Hardware Requirements

<b>Supported Operating Systems for Simcenter Femap and Simcenter Nastran</b>					
	<b>v2022.x</b>	<b>v2021.x</b>	<b>v2020.x</b>	<b>v2019.1</b>	<b>v12.x</b>
Windows 11	No	No	No	No	No
Windows 10	Yes	Yes	Yes	Yes	Yes
Windows 8.1 – 64 bit	Yes	Yes	Yes	Yes	Yes
Windows 8.1 – 32 bit	No	No	No	No	No
Windows 8.0	No	No	No	No	No
Windows RT	No	No	No	No	No
Windows 7 – 64 bit	No	No	No	Yes	Yes
Windows 7 – 32 bit	No	No	No	No	No

<b>Supported Operating Systems for Femap and NX Nastran</b>					
	<b>v11.4.x</b>	<b>v11.3.x</b>	<b>v11.2.x</b>	<b>v11.1.2</b>	<b>v11.1.1</b>
Windows 11	No	No	No	No	No
Windows 10	Yes	Yes	Yes	No	No
Windows 8.1	Yes	Yes	Yes	Yes	Yes
Windows 8.0	No	No	No	No	No
Windows RT	No	No	No	No	No
Windows 7 – 64 bit	Yes	Yes	Yes	Yes	Yes
Windows 7 – 32 bit	No	No	No	No	No
Windows Vista	No	No	No	No	No
Windows XP	No	No	No	No	No

Femap Supported Operating Systems and Minimal Hardware Requirements

Supported Operating Systems – Femap v11.1.0 and NX Nastran		
	Femap	NX Nastran
Windows 11	No	No
Windows 10	No	No
Windows 8.x – 64 bit	Yes	Yes
Windows 8.x – 32 bit	Yes	No
Windows 8 RT	No	No
Windows XP – 64 bit	Yes	No
Windows XP – 32 bit	Yes	No
Windows 7 – 64 bit	Yes	Yes
Windows 7 – 32 bit	Yes	No
Windows XP – 64 bit	Yes	No
Windows XP – 32 bit	Yes	No
Windows XP – 32 bit	Yes	No
Windows XP – 64 bit	Yes	No
Windows Vista – 32 bit	Yes	No
Windows Vista – 64 bit	Yes	Yes

### **Simcenter Nastran Version included with Femap as Bundled Solver**

<b>Femap Version</b>	<b>NX Nastran Version</b>
Femap v2022.2	Simcenter Nastran 2022.1, Build 2019
Femap v2022.1	Simcenter Nastran 2022.1, Build 2007
Femap v2021.2	Simcenter Nastran 2021.1, Build 1953
Femap v2021.1	Simcenter Nastran 2020.2, Build 1938
Femap v2021.1	Simcenter Nastran 2020.1, Build 1915
Femap v2020.1	Simcenter Nastran 2019.2, Build 1884
Femap v2019.1	Simcenter Nastran 2019.1, Build 1859
Femap v12.x	NX Nastran 12.02
Femap v11.4.2	NX Nastran 11.02
Femap v11.4.1, v11.4.0	NX Nastran 11.01
Femap v11.3.2	NX Nastran 11
Femap v11.3.1, v11.3.0	NX Nastran 10.2
Femap v11.2.2, v11.2.1	NX Nastran 10.2
Femap v11.2.0	NX Nastran 10.0
Femap v11.1.1	NX Nastran 9.0
Femap v11.1.0 – 64 bit	NX Nastran 9.0
Femap v11.1.0 – 32 bit	NX Nastran 8.5

## **Femap v2022.x Licensing Requirements**

Femap v2022.2 requires a v2022.1 license file or USB Dongle Upgrade Codes and Femap v2022.1 requires a v2022.1 license file or USB Dongle Upgrade Codes. A license for any of these two versions can be used for prior versions of Femap.

### **Nodelocked - Rainbow SuperPro USB Dongle (included with every nodelocked license of Femap)**

You will need an open USB port to use this device.

The driver for this device is included in the *SentinelDriver* folder under the main Femap installation location. In addition, the driver can be found in the *SentinelDriver* folder on the Femap DVD or downloaded installation media.

### **Network Floating Licenses**

One computer on your Network will need to be configured as a FlexLM license server.

The overhead of running the FlexLM license server is very low, thus the computer can either be one of the computers running Femap or any other computer on the same network as computers running Femap. The license server machine does not have to be a server class computer, it simply must be able to be “seen” (pinged) by any computer wishing to license Femap using the network floating license protocol.

Setting up the floating license is detailed in the “Installation and Configuration Guide.pdf” file located in the “pdf” directory installed with Femap from the Femap DVD or downloaded installation media.

The following page lists the supported Windows and Linux operating systems for the FlexLM license server for Femap v2022.x.

## Femap Floating License Server Supported Operating Systems – Versions 11.1.x through 2022.x

Femap Version	FlexLM Version	Supported OS's
2022.x	11.16.4	Windows 7 SP1 - 64-bit Windows 10 Windows Server 2016 Windows Server 2019  CentOS: 7.2, 7.6, 7.7, 8.0 Redhat Enterprise Linux Server: 6.9, 7.7, 8.0 Ubuntu: 16.04.02 LTS, 18.04.2 LTS openSUSE Leap 15.0
2021.x		
2020.x		
2019.1	11.16.1.2	
12.0.x	11.14.1.1	Windows 7 – 64 bit Windows 8 - 64-bit (Windows RT not supported) Windows 10 Windows Server  CentOS: 7.3 openSUSE Leap: 42.2 Redhat Enterprise Linux Server: 6.9, 7.3 Ubuntu: 14.04 LTS, 16.04.2 LTS
11.4.x		
11.3.x	11.10.1.0	Windows 7, 32-bit and 64-bit Windows 8, 32-bit and 64-bit (Windows RT not supported) Windows 10 Windows Server  Suse Linux Enterprise Desktop x64 10 Redhat 4.8 x64 Redhat 4.9 i686-x64 Redhat 6.1 Enterprise Linux Desktop Ubuntu 11.4 x64 CentOS 7.2.1511 x64
11.2.x		
11.1.x		

## Modifying the Femap Licensing Type

At the time of installation, the type of Femap license is specified for each computer. This can be modified, when Femap is not running, by running one of the following .bat scripts located in the main Femap installation folder.

<b>Femap License Server Type Scripts</b>	
<b>License Type</b>	<b>Script</b>
Nodelocked USB Dongle	go_dongle.bat
Nodelocked, with a license file or Floating FlexLM	go_network.bat
300-node Demonstration version – no license file, server or dongle required.	go_demo.bat
API only – access Femap only via the API. Requires a valid Femap license via USB Dongle, nodelocked license file, or Floating FlexLM license.	go_api.bat

## **Femap v2022.x Minimum Hardware Requirements**

There are no special hardware requirements for Femap beyond those imposed by Windows. The **minimum** requirements are as follows.

- Computer, CPU:** AMD Ryzen™, Intel Core™, or Intel Xeon®, as required for the Windows OS and Graphics Adapter.
- Memory, RAM:** 64 Bit Windows: 16 GB minimum. At least 32 GB recommended for larger models. More RAM is better for even larger models.
- Graphics Card:** See pages 9 through 11.
- Hard Disk Drive Space Requirements:** See page 9.



## Femap v2022.2 Minimum Free Hard Drive Disk Space Requirements

Minimum Free Hard Drive Space Requirements for a Femap v2022.1 Installation	
Description	Free Disk Space Required
Femap Standalone, includes documentation as pdfs, Sentinel USB Dongle Driver and VisQ,	1.94 Gb
NX Nastran (including NX Nastran and NX Nastran Documentation and NX Nastran Support unzipped)	3.51 Gb
Femap Help Server and Help Documentation <sup>1</sup>	1.39 Gb
Femap Flow/Thermal UI, Solver and Documentation.	809 Mb
Femap Structural Analysis Toolkit with Documentation	419 Mb
<b>Femap Total – All Options</b>	<b>8.06 Gb</b>
Femap FlexLM Server Software	8.4 Mb
<b>Total with Femap FlexLM Server Software</b>	<b>8.07 Gb</b>

- 1: Installation files for the Femap Help Server is found in the *siemensdocserver\_windows* folder under the main Femap v2022.2 installation folder.

**Free Hard Drive space:** In addition to the disk space required for the installation of Femap and its options as shown in the table above, additional **local** free disk space is required for Femap scratch and NX Nastran scratch files.

A minimum of 10 GB is recommended for small models and can increase rapidly as model size increases. Femap model files can range in size from a few Mb for a file with no entities to greater than 1 GB depending on the number of entities and the results sets.

NX Nastran scratch and results files for large models can be hundreds of gigabytes.

## **Femap v2022.x, v2021.x, v2020.x, v2019.1, v12 and v11.x Graphics Card Requirements**

### **General statement regarding Graphics Cards**

Femap has been developed with the intent to support all cards that implement the required versions of OpenGL. However, AMD® considers Radeon™ cards and NVIDIA® considers GeForce® cards to be consumer cards. Therefore, it is highly recommended that Femap be used on PCs with an AMD FirePro or Radeon PRO or a NVIDIA Quadro or RTX cards. Please note that Quadro NVS cards are for business use and are not intended for 3D graphics.

The Femap development group receives significant support from AMD for FirePro and Radeon PRO cards and from NVIDIA for Quadro cards. However, basically no support is received from AMD for Radeon cards and from NVIDIA for GeForce cards.

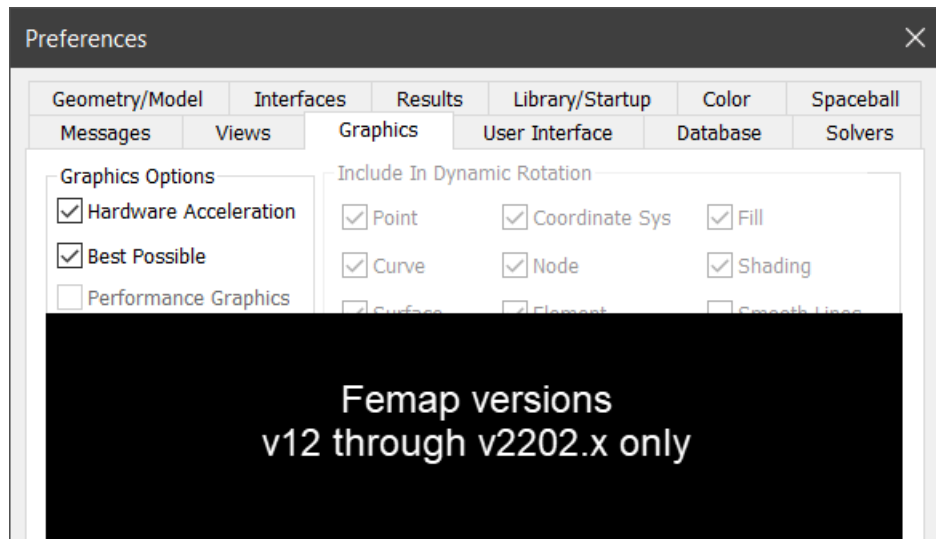
In addition, the latest graphics card drivers should be used and in cases where the PC vendor has a graphics driver specific to their computer model number and graphics chip, the driver certified by the PC manufacturer should be used.

**Base Graphics** requires an OpenGL graphics card with a minimum of 512 Mb dedicated graphics memory.

## Femap Versions 11.1.x through 2022.x Performance Graphics Option Graphics Card Requirements

The **Performance Graphics** option requires a graphics card and accompanying drivers that support OpenGL 4.2 or higher. This option dramatically improves the graphics performance for a model with a high number of entities. Please refer to Page 1-54 of the Femap Commands manual (*commands.pdf*), for a detailed description of entities and view styles supported by Performance Graphics.

- Performance Graphics can be combined with the use of Vertex Arrays and VBOs (see page 12).
- Performance Graphics is not supported on Intel graphics hardware.
- The default setting for Graphics Options in Femap versions 12 through 2022.x is **Best Possible**. This setting will automatically select the graphics settings based on the PC's graphics card. You can override this by disabling this option and manually setting the rest of the Graphics Options.



- For Femap v11.1.x through v11.4.x, Performance Graphics is turned off by default and can be enabled via the *Graphics* tab in Femap *Preferences* dialog box.
- Performance graphics is not fully supported on Intel integrated graphics hardware. Intel graphics hardware more than two (2) years old will not work. Newer Intel integrated graphics hardware appears to work but there is limited support from Intel.

## Femap Graphics – Vertex Buffer Objects Settings

If your graphics card has good support of vertex buffer objects (VBOs), you can get significant performance improvement by selecting VBOs. The VBO Option requires an OpenGL 2.1 graphics card or higher.

- To enable VBOs, select the **File, Preferences** command. In the Preferences dialog box, select the **Graphics** tab, then, select option **3..Vertex Buffer Objects** from the Vertex Arrays pull-down menu. See Section 2.6.2.3 of the Femap Commands manual for details for this option.
- **MAX VBO** should be set in a range from 50 to 75 percent (%) of the total graphics card memory of the installed graphics card.

