

Femap v2019.1 - Operating Systems and Minimum Hardware Requirements

Important Notes Regarding Operating Systems Support

Femap versions v11.1.x, v11.2.x, v11.3.x, v11.4.x, v12 and v2019.1 require a 64 bit Windows OS.

Femap version 2019.1 is the final release that will be 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

Operating Systems – Femap v2019.1 and Femap v12.0.x^{1,2}		
	Femap	NX Nastran
Windows 7 – 64 bit	Yes	Yes
Windows 8.1 (except for Windows RT)	Yes	Yes
Windows 10	Yes	Yes

Operating Systems – Femap v11.4.x^{1,2}, v11.3.x^{1,2}, v11.2.x^{1,2}		
	Femap	NX Nastran
Windows 7 – 64 bit	Yes	Yes
Windows 8.x (except for Windows RT)	Yes	Yes
Windows 10	Yes	Yes

Operating Systems – Femap v11.1.1 and v11.1.2^{1,2}		
	Femap	NX Nastran
Windows 7 – 64 bit	Yes	Yes
Windows 8.x (except for Windows RT)	Yes	Yes
Windows 10	No	No

- 1: 32 bit Windows Operating Systems are not supported.
- 2: Windows XP, Windows Vista and Windows 8.0 are not supported.

Femap Supported Operating Systems (continued)

Operating Systems – Femap v11.1.0		
	Femap	NX Nastran
Windows XP – 32 bit	Yes ^{2,3}	No
Windows XP – 64 bit	Yes ²	No
Windows Vista – 32 bit	Yes ^{2,3}	No
Windows Vista – 64 bit	Yes ²	Yes
Windows 7 – 32 bit	Yes ³	No
Windows 7 – 64 bit	Yes	Yes
Windows 8.x ¹	Yes	Yes
Windows 10	No	No

- 1: Windows RT is not supported.
- 2: Limited support. The OS is no longer being used in development and no support is available from the vendor. An OS upgrade will be required for full support.
- 3: Available by download only. Includes NX Nastran 8.5

NX Nastran Version included with the Femap Installation File Set

Femap Version	NX Nastran Version
Femap v2019.1	Simcenter Nastran 2019.1 ¹
Femap v12	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

1: Build 1859

Femap v2019.1 Licensing Requirements

Nodelocked - Rainbow Super 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 and also in the *SentinelDriver* folder on the Femap DVD and installation filesset.

Network Floating Licenses

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

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

Setting up the floating license is detailed in the network.pdf file installed with Femap, and also located on the Femap DVD and installation filesset.

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

Modifying the Femap License 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.

Femap License Server Type Scripts	
License Type	Script
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 Floating License Server – Supported Operating Systems

For Femap v2019.1, the FlexLM license server requires FlexLM version 11.16.1.2, build 245043 x64_n6 that ships with the Femap installation file set. It has been tested and is supported on the following operating systems:

Microsoft Windows
Windows 7 SP1, 64-bit
Windows 10
Windows Server 2016 Windows Server 2019

Linux 64 bit – Verified and Supported^{1,2}
CentOS: 7.3
openSUSE Leap: 42.2
Redhat Enterprise Linux Server: 6.9, 7.3
Ubuntu: 16.04.02 LTS, 18.04.2 LTS

Linux 64 bit – Verified but Unsupported^{1,2}
Redhat Enterprise Linux: 4.8, 5.5
Ubuntu: 12.04 LTS, 14.04 LTS
openSUSE: 11.4
openSUSE: 42.2

- 1: Requires the LSB runtime libraries.
- 2: 32 bit OS not supported.

Linux – Known to be Incompatible With
Suse Linux Enterprise Desktop 10.0

Femap v2019.1 Minimum Hardware Requirements

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

Computer, CPU: Minimum as required for the Windows OS and Graphics Adapter.

Memory, RAM: 64 Bit Windows: 4 GB minimum. At least 8 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 8.

Femap v2019.1 Minimum Free Hard Drive Disk Space Requirements

Minimum Free Hard Drive Space Requirements for a Femap v12 Installation	
Description	Free Disk Space Required
Femap Standalone, includes documentation, Sentinel USB Dongle Driver and VisQ,	1,415 MB
NX Nastran (including NX Nastran and NX Nastran Documentation and NX Nastran Support unzipped)	2,690 Mb (2.7 Gb)
Femap Flow/Thermal UI, Solver and Documentation.	616 Mb
Femap Structural Analysis Toolkit with Documentation	638 Mb
Femap Total – All Options	5,359 Mb (5.4 Gb)
Femap FlexLM v12.0 Server Software	9 Mb
Total with Femap FlexLM Server Software	5,468 Mb (5.5 Gb)

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 50 Kb 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 v2019, 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 AMD FirePro and Radeon Pro or NVIDIA Quadro 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.

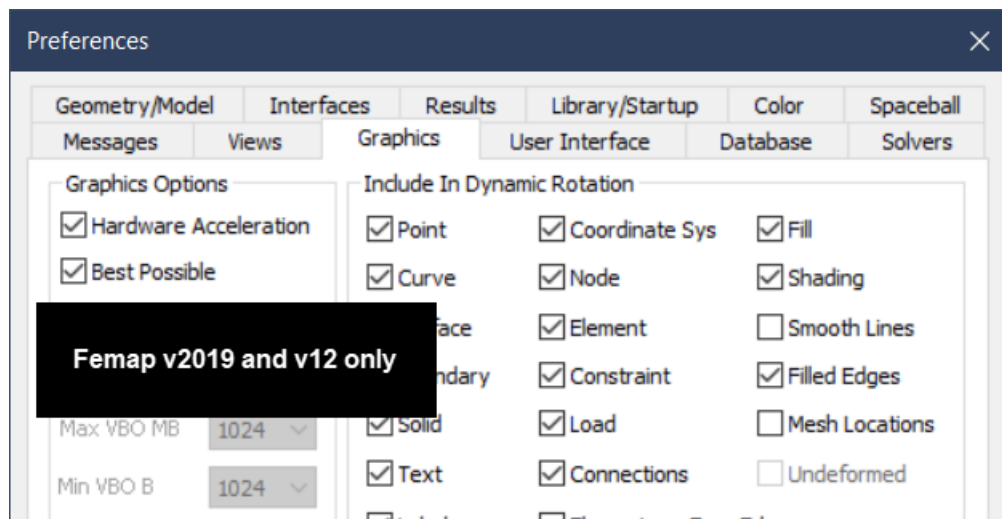
In addition, the latest graphics card drivers should be used and in cases where the PC vendor has a graphics driver specific to their computer model number and graphics chip, the driver certified by the PC manufacturer should be used.

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

Femap Versions 11.1.x through v2019.1 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 large number of entities. Please refer to Page 2-36 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 11).
- Performance Graphics is not supported on Intel graphics hardware.
- Femap versions v2019.1 and v12's default setting for Graphics Options 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.

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.

