



Altair

HyperWorks[®]

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Altair® HyperWorks® v.2017

A Platform for Innovation®

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HyperWorks® 2017 Products

HyperMesh® 1990-2016; HyperCrash® 2001-2016; OptiStruct® 1996-2016; RADIOSS® 1986-2016; HyperView® 1999-2016; HyperView Player® 2001-2016; HyperMath® 2007-2016; HyperStudy® 1999-2016; HyperGraph® 1995-2016; MotionView® 1993-2016; MotionSolve® 2002-2016; HyperForm® 1998-2016; HyperXtrude® 1999-2016; Process Manager™ 2003-2016; Temples™ 1990-2016; TextView™ 1996-2016; MediaView™ 1999-2016; TableView™ 2013-2016; BatchMesher™ 2003-2016; HyperWeld® 2009-2016; HyperMold® 2009-2016; Manufacturing Solutions™ 2005-2016; solidThinking Inspire® 2017 2009-2016; solidThinking Evolve® 2017 1993-2016; Durability Director™ 2009-2016; Suspension Director™ 2009-2016; AcuSolve® 1997-2016; AcuConsole® 2006-2016; SimLab® 2004-2016; Virtual Wind Tunnel™ 2012-2016; FEKO® (©1999-2014 Altair Development S.A. (Pty) Ltd.; ©2014-2016 Altair Engineering, Inc.); ConnectMe™ 2014-2016.

Additional Altair Products:

Multiscale Designer™ 2011-2016; Flux™ v.12.2 1983-2016; InCa3D v.3.1 1996-2016; CDE v.2 2012-2016; Got-It v.3 2002-2016; WinProp v.14 2000-2016

Altair Packaged Solution Offerings (PSOs) Copyright© 2008-2016

Automated Reporting Director™ 2008-2016; GeoMechanics Director 2011-2016; Impact Simulation Director™ 2010-2016; Model Mesher Director™ 2010-2016; Model Verification Director™ 2013-2016; NVH Director™ 2010-2016; Squeak and Rattle Director™ 2012-2016; Virtual Gauge Director™ 2012-2016; Weight Analytics™ 2013-2016; Weld Certification Director™ 2014-2016

Altair Simulation Cloud Suite:

Simulation Manager™ 2003-2016; Compute Manager™ 2003-2016; Display Manager™ 2003-2016; and Process Manager™ 2003-2016.

Altair PBS Works™:

Compute Manager™ 2012-2016; Display Manager™ 2013-2016; PBS™ 1994-2016; PBS Pro™ 1994-2016; PBS Professional® 1994-2016; PBS Application Services™ 2008-2016; PBS Analytics™ 2008-2016; and PBS Desktop™ 2008-2012; e-Compute™ 2000-2010; OpenPBS® 1994-2003 and Personal PBS® 2008-2012.

Software products of solidThinking, Inc., a wholly owned subsidiary of Altair Engineering:

solidThinking Inspire® 2017 2009-2016; solidThinking Evolve® 2017 1993-2016; solidThinking Compose™ 2017 2007-2016; solidThinking Activate™ 2017 1989-2016; solidThinking Embed™ 2017

1989-2016; solidThinking Embed™ SE 2017 1989-2016; Click2Extrude™ Metal 2017 1996-2016; Click2Extrude™ Polymer 2017 1996-2016; Click2Cast® 14.0 2011-2016; Click2Form™ 2017 1998-2016; Envision™ 2013-2016.

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Technical Support

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

Altair Support on the World Wide Web

The Altair web site is a valuable online companion to Altair software. Visit www.altairhyperworks.com for tips and tricks, training course schedules, training/tutorial videos, and other useful information.

Altair Training Classes

Altair training courses provide a hands-on introduction to our products, focusing on overall functionality. Courses are conducted at our main and regional offices or at your facility. If you are interested in training at your facility, please contact your account manager for more details. If you do not know who your account manager is, please send an e-mail to training@altair.com and your account manager will contact you.

Telephone and e-mail

When contacting Altair support, please specify the product and version number you are using along with a detailed description of the problem. Many times, it is very beneficial for the support engineer to know what type of workstation, operating system, RAM, and graphics board you have, so please have that information ready. If you send an e-mail, please specify the workstation type, operating system, RAM, and graphics board information in the e-mail.

To contact an Altair support representative, reference the following table or the information available on the HyperWorks website:

<http://www.altairhyperworks.com/ClientCenterHWSupportProduct.aspx>

Location	Telephone	e-mail
Australia	64.9.413.7981	anzsupport@altair.com
Brazil	55.11.3884.0414	br_support@altair.com
Canada	416.447.6463	support@altairengineering.ca
China	86.400.619.6186	support@altair.com.cn
France	33.1.4133.0992	francesupport@altair.com
Germany	49.7031.6208.22	hwsupport@altair.de
India	91.80.6629.4500 1.800.425.0234 (toll free)	support@india.altair.com
Italy	39.800.905.595	support@altairengineering.it
Japan	81.3.5396.2881	support@altairjp.co.jp
Korea	82.70.4050.9200	support@altair.co.kr
Mexico	55.56.58.68.08	mx-support@altair.com

New Zealand	64.9.413.7981	anzsupport@altair.com
North America	248.614.2425	hwsupport@altair.com
Scandinavia	46.46.460.2828	support@altair.se
Spain	34.910.810.080	support-spain@altair.com
South Africa	27.21.8311500	support@altair.co.za
United Kingdom	01926.468.600	support@uk.altair.com

For questions or comments about this help system, send an email to hwsupport@altair.com.

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Official offices with resellers: Canada, China, France, Germany, India, Malaysia, Italy, Japan, Korea, Spain, Taiwan, United Kingdom, USA

See www.altair.com for complete contact information.

Platform Support

The following table lists the platforms, operating systems, and processors supported by Altair HyperWorks 2017. This includes 2017 solver packages.

Platforms			Altair HyperWorks 2017	
OS	Version	Architecture	GUI Products	Solvers
Windows	7/8.1/10	x86_64	YES	YES
	Server 2008 (R2/HPC)	x86_64	NO	YES
Linux**	RHEL and CentOS 6.6 / 7.2 SLES 11 SP3/12 SP1	x86_64	YES	YES

SLES=SUSE Linux Enterprise Server
RHEL=Red Hat Enterprise Linux

*HyperWorks is not officially supported on Mac OS

Customers can request for non-certified/unsupported installers from their local support office, if needed.

**Check system requirements for Linux package details

SLES 12 SP1, RHEL 7.2 and CENTOS 7.2 Linux distributions have updated windows manager behavior. In these versions, the "x" close button is no longer available. To close a dialog, it is necessary to invoke the context menu from the title bar and dismiss it (using Alt+F4 to close).

HyperWorks may install and run on other non-supported Linux distributions but Altair does not test, certify, verify or warrant the reliability of the products on these platforms.

- Altair products are tested on the KDE and Gnome window managers.
- Xen kernels are currently not supported kernels for Altair HyperWorks applications.



Products Included in the HyperWorks Suite

1. HyperWorks Desktop Applications
2. HyperWorks Solvers
3. AcuSolve
4. Virtual Wind Tunnel (Windows only)
5. SolidThinking (Windows only)
6. SimLab
7. FEKO
8. HyperXtrude (Windows only)

Added Platforms in HyperWorks 2017

1. Red Hat Enterprise Linux 7.2
2. CentOS Linux 7.2
3. SUSE Linux Enterprise Server 12 Service Pack 1

Dropped Platforms in HyperWorks 2017

1. Mac OS X 10.8 64-bit (all)
2. Red Hat Enterprise Linux 5.9
3. KDE window manager support on Linux platforms

Compiler Support for HyperWorks 2017

1. On Windows: Visual Studio 2010 Service Pack 1 (10.0.40219.1 SP1Rel)
2. On Linux: GCC version 4.7.2 20121015 (Red Hat 4.7.2-5) (GCC)

Minimum Operating System Requirements

System/Hardware Information	Linux	Windows
Operating Systems	RHEL/CentOS 6.6 (64-bit) RHEL/CentOS 7.2 (64-bit) SLES 11 SP3 (64-bit) SLES 12 SP1 (64-bit)	7/8.1/10 (64-bit)
Memory	4 GB (higher recommended)	4 GB (higher recommended)
Complete Install Disk Space ~6 GB temporary disk space required for full HyperWorks 2017 installation. (Applications + help files).	Linux 64-bit -> 20 GB TAR package required for installation to extract files on Linux.	Windows 64-bit -> 27 GB
Graphics Hardware**	OpenGL 3D graphics accelerator compatible with OpenGL 3.2 or higher True color (24-bit) support Install/update to most recent OpenGL patches/drivers 1680x1050 screen resolution or higher for optimal user experience 2 GB or higher dedicated RAM Only AMD and NVIDIA GPUs supported (Intel chipsets are not supported)	OpenGL 3D graphics accelerator compatible with OpenGL 3.2 or higher True color (24-bit) support Install/update to most recent OpenGL patches/drivers 1680x1050 screen resolution or higher for optimal user experience 2 GB or higher dedicated RAM Only AMD and NVIDIA GPUs supported (Intel chipsets are not supported)
*Browsers/Online Help (plug-in)	Firefox NOTE: Java Plug-in required	Firefox Internet Explorer 8 (or higher) ActiveX Plug-in required **Does not support "Protected Mode" under Internet Explorer

***NOTE:** Local help installations may require modifying the browser to allow running active content from the hard disk. For search capability, the users should have a browser supporting either ActiveX (IE on Windows) or Java Environment plugin installed on their machine.

****NOTE:** HyperWorks Graphical User Interface (GUI) products, when used with Ultra High Definition (UHD) displays consisting of 1920x1200 or higher (for example, 3200x1800, 3840x2160 or 4096x2160), may result in graphical problems. Some GUI items may not be displayed correctly, some



functionality such as image captures may not capture images correctly, and window selection may become an issue. HyperWorks 2017 does not officially support these high screen resolutions. We suggest setting your resolution to 1920x1200 or lower to resolve or minimize these types of issues from occurring. Our development teams are aware of these problems and are working closely with the hardware vendors to find a quick resolution to the issue.

Linux System Requirements

This table includes the 32-bit and 64-bit packages needed for running HyperWorks on a 64-bit RedHat Enterprise Linux operating system. (Please use equivalent packages on SUSE Linux Enterprise Server)

32-bit (compatibility)	64-bit (native)	
glibc-2.5-107	glibc-2.5-107	libgomp-4.4.7-1
libgcc-4.1.2-54	e2fsprogs-libs-1.39-35	libstdc++-4.1.2-54
libICE-1.0.1-2.1	expat-1.95.8-11	compat-libf2c-3.4.6-4.1
libSM-1.0.1-3.1	libgcc-4.1.2-54	libxml2-2.6.26-2.1.15
libXt-1.0.2-3.2	mesa-libGL-6.5.1-7.10	libXcursor-1.1.7-1.2
libstdc++-4.1.2-54	mesa-libGLU-6.5.1-7.10	libXfixes-4.0.1-2.1
	libICE-1.0.1-2.1	libXinerama-1.0.1-2.1
	libSM-1.0.1-3.1	libXrandr-1.1.1-3.3
	libX11-1.0.3-11	atk-1.12.2-1
	libXau-1.0.1-3.1	cairo-1.2.4-5
	libXdmp-1.0.1-2.1	gtk2-2.10.4-29
	libXext-1.0.1-2.1	libjpeg-6b-37
	libXft-2.1.10-1.1	lcms-1.18-0.1
	libXi-1.0.1-4	libmng-1.0.9-5.1
	libXmu-1.0.2-5	pango-1.14.9-8
	libXrender-0.9.1-3.1	libpng-1.2.10-17
	libXScrnSaver-1.1.0-3.1	qt-3.3.6-26
	libXt-1.0.2-3.2	bash-3.2-32
	libXtst-1.0.1-3.1	elfutils-libs-0.137-3
	libXxf86vm-1.0.1-3.1	elfutils-libelf-0.137-3
	bzip2-libs-1.0.3-6	xorg-x11-server-Xvfb-1.1.1-48.100
	libdrm-2.0.2-1.1	xorg-x11-server-Xorg-1.1.1-48.100
	fontconfig-2.4.1-7	xorg-x11-server-Xnest-1.1.1-48.100
	freetype-2.2.1-31	xorg-x11-server-utils-7.1-5

There may be other relevant packages like Fonts, and X11 packages needed. Below are the Fonts needed for HyperWorks Fonts. Scalable fonts also required for the following:

Helvetica, Times, New Century SchoolBook, B&H Luxi Sans/Serif, Typeface, Bitstream Vera Sans/Serif, ISO8859-1 (75dpi/100dpi), TrueType and Utopia.

Altair HyperView 2017 Stereoscopic 3D Setup

This section describes what is needed for enabling and displaying HyperView in stereoscopic 3D. HyperView was tested using NVIDIA and AMD hardware and recommendations below are also located at www.nvidia.com/object/3d-vision-main.html or www.amd.com/us/products/technologies/amd-hd3d/Pages/hd3d.aspx

Requirements

1. A display capable of displaying 120Hz or higher refresh rates
 - a. If using a regular display monitor then an IR emitter and corresponding glasses, like the NVIDIA 3D vision kit, maybe required in order to view 3D images.
2. A compatible 3D TV using AMD HD3D or the NVIDIA 3DTV Play software drivers or NVIDIA's 3D Vision Kit
 - a. NVIDIA 3D:
A complete list of TVs and cards can be found here:
www.nvidia.com/object/3d-vision-displays.html
www.nvidia.com/object/3d-vision-geforce-cards.html
www.nvidia.com/object/quadro_pro_graphics_boards.html
 - b. AMD HD3D:
A complete list of TVs can be seen here <http://www.nvidia.com/object/3d-vision-displays.html>
3. A driver version of 197.03 or newer (recommend the 320.00 driver, or newer) for NVIDIA cards and 9.003.3.3 or higher for AMD cards should be used.

NOTE: In order to work with a 3DTV, the software from NVIDIA called "3DTV Play" will need to be installed. It comes with the 3D vision kit or can be purchased separately. More information can be found here: <http://www.nvidia.com/object/3dtv-play-overview.html>
4. Minimum Operating System requirements and hardware from NVIDIA and AMD:
 - a. Microsoft Windows Vista or 7 (64-bit)
 - b. Intel Core 2 Duo or AMD Athlon X2 CPU or higher
 - c. 1GB or system memory (2GB recommended)
 - d. 100 MB hard disk free