

CATIA Solutions Version 5 Release 20 Modification Level 0

The new products and enhancements in CATIA V5.20 deliver the following capabilities:

- Support customers with production and quality improvements in all domains and industries
- Natively integrate ICEM shape design products to fully address Automotive Class A requirements
- Support operating system platform upgrades
- Ensure compliance with US FAA (Federal Aviation Administration) certification policies

Hardware Requirements

Common Hardware Requirements

The following requirements are common to all operating systems supported by this release. Platform-specific requirements are specified in subsequent topics below.

- Required components and features
 - Disk drive: An internal or external disk drive (minimum recommended size is 4 GB) is required to store program executables, program data, the user environment, and to supply paging space. Installation of all CATIA V5 products requires 2.0 GB on Microsoft® Windows®, 2.4 GB on AIX®, and 2.3 GB on Solaris.
 - Memory: 256 MB of RAM is the minimum recommended for all applications. 512 MB of RAM is recommended for DMU applications on large assemblies and for the Digitized Shape Editor 2 (DSE) product. Requirements may be greater when large amounts of data are used.
 - Internal/external drives: A CD-ROM drive is required for program installation and for access to the online documentation, which can optionally be downloaded to disk.
 - Display: A graphics color display compatible with the selected platform-specific graphics adapter. The minimum recommended size for usability reasons is 17 inches. Minimum resolution for Windows workstations is 1024 x 768 and 1280 x 1024 for UNIX® workstations. When selecting a graphics adapter, hardware texturing capability is strongly recommended when using CATIA V5 products that use texture mapping, in which case

the amount of texture RAM has to be adequate for the number and complexity of textures to be used.

- Keyboard: A specific keyboard compatible with the selected installation locale may be required for national language support.
- Pointing device: Three-button mouse. On Windows workstations, a two-button mouse may alternatively be used (the third button is emulated with a keyboard sequence). The three-button mouse is recommended for usability reasons. IntelliMouse (two buttons plus a wheel instead of the third button) is an alternative to the three-button mouse on Windows workstations. The wheel acts as the middle button to allow additional manipulations, such as panning and scrolling.
- Optional components and features: For CATIA P2 and P3, SpaceBall or SpaceMouse, in addition to the standard mouse, can be used to perform graphic manipulations (zoom, pan, rotate). The required drivers are delivered with these devices. Support of these devices is also available with the DMU Navigator 1 and DMU Space Analysis 1 P1 products.

The robustness of the overall solution is dependent on the robustness of the operating system and the hardware environment used. Windows XP® and UNIX hardware configurations certified by Dassault Systèmes for running CATIA V5 products are published at

<http://www.3ds.com/support>

Although CATIA V5 products might run on configurations or with graphic adapters other than those specified for each of the platforms below, incidents specific to such configurations or adapters will not be accepted for support.

Hardware Requirements for Microsoft Windows XP

- System unit: An Intel® Pentium® 4 or Xeon® based workstation running Microsoft Windows XP Professional Edition SP2.
- Graphics adapter: A graphics adapter with a 3D OpenGL accelerator is required.

Note: Graphics performance on local transformations (panning, zooming, rotating model) will depend on the selected graphics adapter. The graphics adapter should have the following capabilities:

- 24-bits, true color, double buffered visual
- 24-bits, Z-buffer
- Stencil buffer
- Minimum supported resolution: 1024 x 768; a resolution of 1280 x 1024 is recommended for usability reasons
- Network adapter: An active LAN adapter (Ethernet or Token Ring, installed and configured) is required for license key purposes.

Hardware Requirements for Microsoft Windows x86-64 64-bit

- System unit: An Intel Xeon EM64T or AMD Opteron 64-bit based workstation running Microsoft Windows XP Professional x64 Edition.
- Memory: 4 GB is the recommended minimum.
- Disk drive: 2.5 GB is the recommended minimum.
- Graphics adapter: A graphics adapter with a 3D OpenGL accelerator is required.

Note: Graphics performance on local transformations (panning, zooming, rotating model) will depend on the selected graphics adapter. The graphics adapter should have the following capabilities:

- 24-bits, true color, double buffered visual
- 24-bits, Z-buffer
- Stencil buffer
- Minimum supported resolution: 1024 x 768; a resolution of 1280 x 1024 is recommended for usability reasons
- Network adapter: An active LAN adapter (Ethernet or Token Ring, installed and configured) is required for license key purposes.

Hardware Requirements for IBM AIX

Note: Any future release will not support IBM AIX.

- System unit: Any IBM workstation that is POWER processor-based and which is supported by AIX V6.1.
- Graphics adapter: One of the following graphics adapters is required.
 - GXT4000P
 - GXT4500P
 - GXT6000P
 - GXT6500P

Hardware Requirements for Sun(TM) Solaris

Note: Any future release will not support Sun Solaris.

- System unit: Any Ultra1, Ultra2, Ultra10, Ultra30, Ultra60, Sun Blade 100, Sun Blade 150, Sun Blade 1000, Sun Blade 1500, Sun Blade 1500+ (1.5 GHz), Sun Blade 2000, or SunBlade 2500 workstation based on the UltraSPARC processor supported on Solaris 10.
- Graphics adapter: One of the following graphics adapters is required.
 - Creator3D
 - Creator3D Series III
 - Elite 3D (U10-440MHz only for U10 workstations)
 - Elite 3D Lite
 - Expert 3D
 - XVR-500
 - XVR-600
 - XVR-1000
 - XVR-1200

- CATIA V5.20 does not support:
 - IBM AIX V5.3
 - Hewlett-Packard HP-UX
- Any future release will not support:
 - Sun Solaris
 - AIX

Refer to the *Program Directory* or contact your Dassault Systemes Support Center for appropriate corrective service to apply to the software described below.

Microsoft Windows XP 32-bit

Microsoft Windows XP Professional SP3. Microsoft Windows XP 32-bit delivers an implementation of OpenGL libraries. Dassault Systemes provides recommendations related to driver levels based on certified configurations. These drivers may offer a CATIA V5 application setting (see Control Panel, Display Properties tabs). These should be selected when available because they may contain application-specific features.

A localized version of the operating system may be required when the selected installation locale differs from Latin 1.

Orbit 3.3 is required on 32-bit operating systems.

For a list of certified configurations, visit

<http://www.3ds.com/support>

Microsoft Windows Vista 32-bit

Microsoft Windows Vista x32 Enterprise and Business Edition SP1. Starting with Windows Vista, IPv6 is installed and activated by default. However, a dual IPv4 and IPv6 layer is provided, and because V5 client-server communication does not support IPv6 in V5.20, it is recommended to deactivate IPv6 and use IPv4. To deactivate IPv6, refer to the following Microsoft Technet article:

<http://technet2.microsoft.com/windowsserver/en/library/cba5a7ac-742a-49a6-8212-3844c768a0f81033.mspx?mfr=true>

See sections:

- To Uninstall IPv6 Using the Network Connections Folder
- or
- To Uninstall IPv6 from a Computer from the Command Prompt

Note that this operation requires administrator credentials.

For a list of certified configurations, visit

<http://www.3ds.com/support>

Microsoft Windows XP 64-bit

Microsoft Windows XP Professional x64 Edition SP2. Microsoft Windows XP Professional x64 Edition delivers an implementation of Open GL libraries. Dassault Systemes provides recommendations related to driver levels based on certified configurations. These drivers may offer a CATIA V5 application settings (see Control Panel, Display Properties tabs), which should be selected when available, as they may contain application-specific features. When installing 32-bit

Programming Requirements

Common Software Requirements

Important Notices

applications, they will be able to allocate up to 4GB of memory when running on the 64-bit operating system.

Note: Memory consumption for a 64-bit process is completely different than for a 32-bit process. In this situation, it is not pertinent to compare the performance monitor virtual bytes counter between a 32- and 64-bit process. Although the 4 GB limitation of global address space make this counter important when tracking a 32-bit process, virtual address space for 64-bit process can go up to 8 TB.

For a list of certified configurations, visit

<http://www.3ds.com/support>

Microsoft Windows Vista 64-bit

Microsoft Windows Vista x64 Enterprise and Business Edition SP1. Starting with Windows Vista, IPv6 is installed and activated by default. However, a dual IPv4 and IPv6 layer is provided, and because V5 client-server communication does not support IPv6 in V5.20, it is recommended to deactivate IPv6 and use IPv4. To deactivate IPv6, refer to the following Microsoft Technet article:

<http://technet2.microsoft.com/windowsserver/en/library/cba5a7ac-742a-49a6-8212-3844c768a0f81033.mspx?mfr=true>

See sections:

- To Uninstall IPv6 Using the Network Connections Folder
- or
- To Uninstall IPv6 from a Computer from the Command Prompt

Note that this operation requires administrator credentials.

For a list of certified configurations, visit

<http://www.3ds.com/support>

AIX 32-bit and 64-bit Platforms

AIX 6.1 Technical Level 02 (using 64-bit kernel) with following components:

- XL C/C++ V10.1.0.0 Run-time Environment (part of AIX 6.1 TL02)
- XL Fortran V12.1.0.0 Run-Time Environment (part of AIX 6.1 TL02)
- OpenGL 1.3 as delivered on the AIX CDs

For a list of certified configurations, visit

<http://www.3ds.com/support>

Sun Solaris

Solaris 10 HW 03/05 (SPARC).

Requirements for Interoperability with ENOVIA VPLM Products

- CATIA V5 and ENOVIA VPLM V5 must be at the same release, service pack, and hot fix level for proper interoperability.
- CATIA V5 and ENOVIA VPLM interoperability is supported between various CATIA V5 releases and ENOVIA VPLM PTF levels. Refer to the most recent ENOVIA VPLM PTF program directory for the current prerequisite and recommended interoperability PTFs.

Product-Specific Software Requirements for CATIA P2

- CATIA - V4 Integration 2 (V4I) requires, on the CATIA V5 client, for interoperability with CATIA V4 CDM and ENOVIA VPLM ENOVIAVPM:
 - If the database server is DB2®, then on AIX, Microsoft Windows, or Solaris use DB2 UDB V8.2.4.
 - If the database server is Oracle, then on AIX, Microsoft Windows, or Solaris, use Oracle 10gR2.

Note: Contact your IBM or Oracle representative for support and planning information on DB2 UDB or Oracle.

Notes

CATIA V4 CDM and ENOVIA VPLM ENOVIA VPM interoperability is available through CATIA - V4 Integration 2 (V4I) for the following products

- CATIA - Assembly Design 2 (ASD)
- CATIA - DMU Kinematics Simulator 2 (KIN)
- Interoperability of CATIA V5 on the supported Microsoft Windows platforms with ENOVIA VPLM ENOVIAVPM through ENOVIA 3d com requires, on the client side, either (depending whether the database server is a DB2 or an Oracle server):
 - DB2 Universal Database V8.2.4 Client for Windows
 - Oracle Client Version 10gR2 for Windows
- Math Kernel Libraries - When on an Intel® architecture in a Windows environment, the performance of the following products can be improved through the use of Intel Math Kernel Libraries at level 6.0:
 - CATIA - Generative Part Structural Analysis 1 (GP1)
 - CATIA - Generative Part Structural Analysis 2 (GPS)
 - CATIA - Generative Assembly Structural Analysis 2 (GAS)
 - CATIA - ELFINI Structural Analysis 2 (EST)
 - CATIA - Product Engineering Optimizer 2 (PEO)
 - CATIA - Generative Dynamic Response Analysis 2 (GDY)

MKL Libraries at level 6.0 can be obtained from

<http://software.intel.com/en-us/intel-mkl/>

In a Windows XP x64 environment, MKL 8.0 or higher is recommended.

This requirement is optional. Refer to the Before you Begin section in the *Generative Structural Analysis User's Guide* for additional information.

Access to Product Information

Product information is delivered with the product CDs in HTML format. An HTML browser is required to access this documentation. Online

documentation may be installed and used only in the same supported operating environments as CATIA V5.

- In a UNIX environment

For AIX - Firefox 2.0
For SUN Solaris SPARC - FireFox 3.0
- In a Microsoft Windows environment, one of the following browsers is required:

Microsoft Internet Explorer at a minimum level of 7.0
Firefox 3.0 (32-bit)

In addition to a Java(TM)-enabled Web browser, the Java Plug-in at level 1.5 to search online documentation:

- For AIX, Java Runtime Environment version Java JRE 6 SR3 minimum, which can be downloaded from

<http://www.ibm.com/developerworks/java/jdk/aix/service.html>
- For Microsoft Windows and Sun Solaris, Java Runtime Environment version 6 Update 10 minimum, which can be downloaded from

<http://java.sun.com/products/archive/index.html>

Although access to the online documentation might work on other HTML browsers, incidents specific to browsers other than those specified are not eligible for support.

Prerequisites for the License Management Environment

Microsoft Windows workstations must have an active LAN card (Ethernet or token ring) and TCP/IP installed and properly configured, even in the case of nodelock keys, though for nodelock there is no need to have the workstations connected to the network. No additional license management software is required when accessing nodelock license keys.

Dassault Systemes License Use Management (LUM) is required to serve concurrent license keys across a network. A LUM configuration file (i4ls.ini) is required on CATIA V5 clients to access concurrent license keys from these servers. Server and Nodelock license management mechanisms are available for CATIA V5 P1, P2, and P3 on all supported operating environments.

The minimum Dassault Systemes LUM level is V4.6.8.3.

The latest release of Dassault Systemes LUM, together with any applicable patches, can be downloaded at no charge from

<http://www.3ds.com/support/resource-library/>

Macro Replay Capabilities

CATIA V5 has built-in macro record and replay capabilities. For UNIX, the interpreter is VB Script 3.0 from Mainsoft. Its components are included in CATIA V5 as shared libraries.

For Windows, the interpreter is either:

- VB Script at a minimum level of V5.0. It is delivered with Microsoft Internet Explorer. VB Script libraries at level 5.0.0.3715 are delivered with Microsoft Internet Explorer 5.0 or at later levels with later versions of Internet Explorer. Use of VB Script is recommended for developing Microsoft Windows- and UNIX-compatible macros.
- Microsoft VisualBasic for Applications (VBA) at a minimum level of 6.0. VBA is delivered and installed by default with CATIA V5.

Printer and Plotter Support

- UNIX - CATIA V5 supports the following plotter/printer languages:
 - CGM-ISO, ATA, CALS
 - Hewlett Packard HP-GL/2-RTL and HP-GL or IBM-GL subsets
 - OCE Graphics GPR50: VDF plotting routines
 - PostScript
- Windows - Printers and plotters are supported through the vendor's drivers for the targeted printer or plotter relative to the targeted version of the operating system. Contact the printer or plotter vendor for requirements and support.

CATIA V5 General Packaging Principles

- A CATIA P1 product or a CATIA P1 configuration requires or must include (in the case of configurations) CATIA - Object Manager 1 (CO1). P1 products can be used on P2 or P3, and in such cases, they operate with CATIA - Object Manager 2 (COM) or CATIA - Object Manager 3 (CO3), respectively.
- A CATIA P2 product or a CATIA P2 configuration requires, or must include (in the case of configurations), CATIA - Object Manager 2 (COM). P2 products can be used on P3, and in such cases, they operate with CATIA - Object Manager 3 (CO3).
- CATIA - COM 1 to 2 Extension (C12) allows all P2 products to be added on to P1 configurations. The C12 product effectively upgrades the P1 infrastructure (CO1) to the P2 infrastructure (COM). The C12 product does not change the underlying P1 configuration; included products remain P1. The C12 product can be used as a shareable (C12) or add-on (C12) product.
- A CATIA P3 product or a CATIA P3 configuration requires or must include (in the case of configurations) CATIA - Object Manager 3 (CO3). P1, P2, and P3 shareable and add-on products are available to P3 configurations as shareable or add-on products.
- License keys for CATIA configurations are acquired and released for the total configuration.
- The functions within a configuration cannot be shared.
- A configuration is required for each CATIA V5 seat.
- CATIA V5 add-on (AOP) and sharable products may require prerequisite products that are not included in a standard purchased configuration. When a prerequisite product is not included in the selected standard configuration, both the AOP and its prerequisite products must be purchased and included as AOPs within a custom configuration. Prerequisites for shareable products can be satisfied by a standard configuration, by an AOP within a custom configuration, or by a shareable product.
- CATIA - V4 Integration 2 (V4I) is included in all P2 and P3 configurations, and CATIA - V4 Integration 1 (V4I) is included in all P1 configurations.

Licensed Program Materials Availability

- Restricted materials - No. This licensed program is available without source licensed program materials. It is available in object code only.

Supplemental Terms

Type/Duration of Program Services (also referred to as “Support Services”)

You will find all necessary information including processes, on Dassault Systemes web site :

<http://www.3ds.com/terms/support-policies>

The License Management Model

CATIA V5 License Management Model

CATIA controls the number of concurrent users of a CATIA configuration or product, according to the number of license keys acquired for the configuration or product.

CATIA V5 delivers identical license management mechanisms on UNIX and Windows environments, based on Dassault Systemes License Use Management (LUM). The following license management principles apply:

- A CATIA V5 configuration (standard or custom) will require a license key. License keys for CATIA V5 configurations are acquired and released for the total configuration. The products within a configuration cannot be shared.
- Each CATIA V5 shareable product will require a license key, in addition to one for the prerequisite configuration and any prerequisite product, if applicable.
- In all cases, CATIA configuration license keys are acquired at the beginning of the process and are released at its termination.
- CATIA V5 add-on (AOP) and shareable products may require license keys for prerequisite products that are not already included in a standard configuration. Prerequisites for shareable products can be satisfied by a standard configuration, by an AOP within a custom configuration, or by a shareable product. However, because all add-on products are defined within one custom license key, any AOP prerequisites must be satisfied by either a standard configuration or by other AOPs purchased and defined within the same custom configuration.

CATIA V5 can be used in three license management modes: nodelock, with concurrent usage of license keys on a network, or concurrent offline license management.

Nodelock Usage: The use of a local display is mandatory for CATIA V5 usage in nodelock mode. There is no limit to the number of CATIA V5 processes launched for a given license key (configuration or product). For instance, a user can launch the following simultaneous processes:

- A V5 interactive session

- A V5 process executed through an OLE container application
- Replay of macros recorded from captured sequences of V5 user interactions

In the nodelock mode of operation, only one CATIA license key per configuration and shareable product can be registered per machine, and only one CATIA user can run at a time on that machine. If multiple license keys per configuration or shareable product, or multiple users on a single machine, are required, refer to the **Concurrent usage** section.

Concurrent Usage: A user on one machine on one display uses one license key per configuration or shareable product used, regardless of the number of processes. If the display changes, then an additional license key is taken for the corresponding process.

Dynamic License Management: CATIA shareable product license keys can be acquired and released during the session. (The ability to acquire and release licenses is not available for configurations.) Shareable license keys acquired at the beginning of the session cannot be released before the end of the session; only license keys dynamically granted upon user request during the session can be released during the session.

Concurrent Offline License Management: A concurrent license key control technique is available via the LUM server. It gives CATIA, ENOVIA DMU, DELMIA, and RADE applications running on a Windows laptop the ability to disconnect from the license key server for a specific period of time. During the checkout period, the server license key is unavailable for use by another concurrent user. This feature is designed to add additional flexibility to a user's work environment. It is offered to accommodate short-term travel needs and collaboration while away from a fixed office environment or server connection. All terms and conditions, including cross-border licensing terms, are unchanged, and users will check-out and check-in license keys at their home server, where rules and procedures are controlled by LUM.

Note to Users of the following ENOVIA SmarTeam-branded CATIA Integration Products:

- SmarTeam - CATIA Team PDM Configuration (TDM)
- SmarTeam - CATIA Integration Product (CAI)
- SmarTeam - CATIA Web Team PDM Configuration (TDW)

These ENOVIA SmarTeam products do not support dynamic or concurrent offline license management. Licenses for these products are acquired dynamically when the function is invoked from CATIA and may not be released until the CATIA session is ended.

Educational Allowance Available

The standard educational allowance does not apply to CATIA V5 products. However, these products are available in several configurations under the Dassault Systemes Academic program.

Designated Machine Identification

No

Test Period

No

make these available in all countries in which Dassault Systemes operates.

Any other documentation with respect to this licensed program, including any documentation referenced herein, is provided for reference purposes only and does not extend or modify these specifications.

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Use-Based Charges/Usage Restrictions

Charges for this program are based on the number of users logged on at any time. The total number of users logged on may not exceed the number for which you have been authorized. If the total number exceeds your authorization, you must notify Dassault Systemes and obtain additional authorizations.

Softcopy Publications

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Following the discontinuance of all program services, this program will be provided "As Is" as specified in the Dassault Systemes license.

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Footnotes:

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