



## Features and Benefits

AutoCAD® 2004 offers new and enhanced functionality that enables you to create with speed, share with ease, and manage with efficiency.

### Create with Speed

#### Performance

Feature	Function	Benefit
File Open and File Save	Open and save your drawings significantly faster (30 percent <sup>1</sup> and 66 percent, respectively) when AutoCAD 2004 DWG data is located on a network drive.	Save time accessing drawings whether they are stored locally or on a network drive.
Autodesk Shape Manager (ASM)	Open and save drawing files comprised of 3D solids faster using the ASM binary format.	3D models take advantage of the new ASM binary format – opening/saving 3D models is substantially faster than in previous releases.
Drawing Thumbnails	In Windows Explorer – you can now view drawing thumbnails in your directory folders.	Quickly view and access drawings by previewing them first in Microsoft Windows Explorer.

#### Tool Palettes

Feature	Function	Benefit
Modeless Dialog Box Functionality	New tool palettes include <u>all</u> of the functionality offered by modeless dialog boxes. <sup>2</sup>	Maintain easy access to tool palette content while benefiting from the increased screen real estate offered by modeless dialog boxes.
Custom Content	Tool palettes can be easily customized for storing frequently used blocks and hatches.	Save time finding and inserting frequently used content, hatches, and solid fills into your designs.

<sup>1</sup> Measurement is a preliminary indicator based on automation testing over a controlled network. Results are approximate and are subject to error and change. Product information and specifications are subject to change without notice. Autodesk, Inc., provides this information “as is,” without warranty of any kind, either express or implied.

<sup>2</sup> Modeless dialog boxes differ from other dialog boxes because they continue to display even when you use other tools and commands. New functionality has been added to some of the AutoCAD modeless dialog boxes to include auto-hide, transparency, docking, content scrolling, and tabs.

Tool Properties	Pre-assign tool properties such as layer, color, and scale. Properties are automatically applied as you insert content into your drawings.	Save time and maintain consistency by ensuring that content is inserted on the proper layer with the correct scale, linetype, color, etc.
Tool Palette Views	Control how tools are displayed in the tool palettes. You can control the size of the icon and whether the settings are applied only to the current tool palette or to all tool palettes.	Variable levels of tool description detail enable you to create tool palettes to suit your own environment. Detailed tool descriptions make new tools easier to learn while simplified iconic tool displays save screen real estate for the experienced user.
Export/Import	Save and share a tool palette by exporting it or importing it as a tool palette file.	Share standard tools and tool palettes across your organization.
Auto-Hide	Modeless dialog boxes can automatically minimize until you pass your cursor over the title bar.	Provides increased screen real estate for designing and drafting, while maintaining easy access to occasionally used tools.
Transparency	Apply variable levels of transparency to modeless dialog boxes.	Increase the visible drawing area while having instant access to frequently used tools.
Docking	Modeless dialog boxes can float over the drawing area or automatically dock as you move them to the edge of the display.	Dock modeless dialog boxes at a specific location so that you can access the tools you use most from the location of your choice.
Content Scrolling	Allows scrolling of content within a modeless dialog box when the size of the dialog box is less than is required to display the full content.	Allows you to minimize the size of your dialog boxes, increasing screen real estate, while maintaining easy access to content.
Tabs	Tab design enables tools to be grouped into logical sets.	Gain easy access to many tools using a minimum amount of screen space.

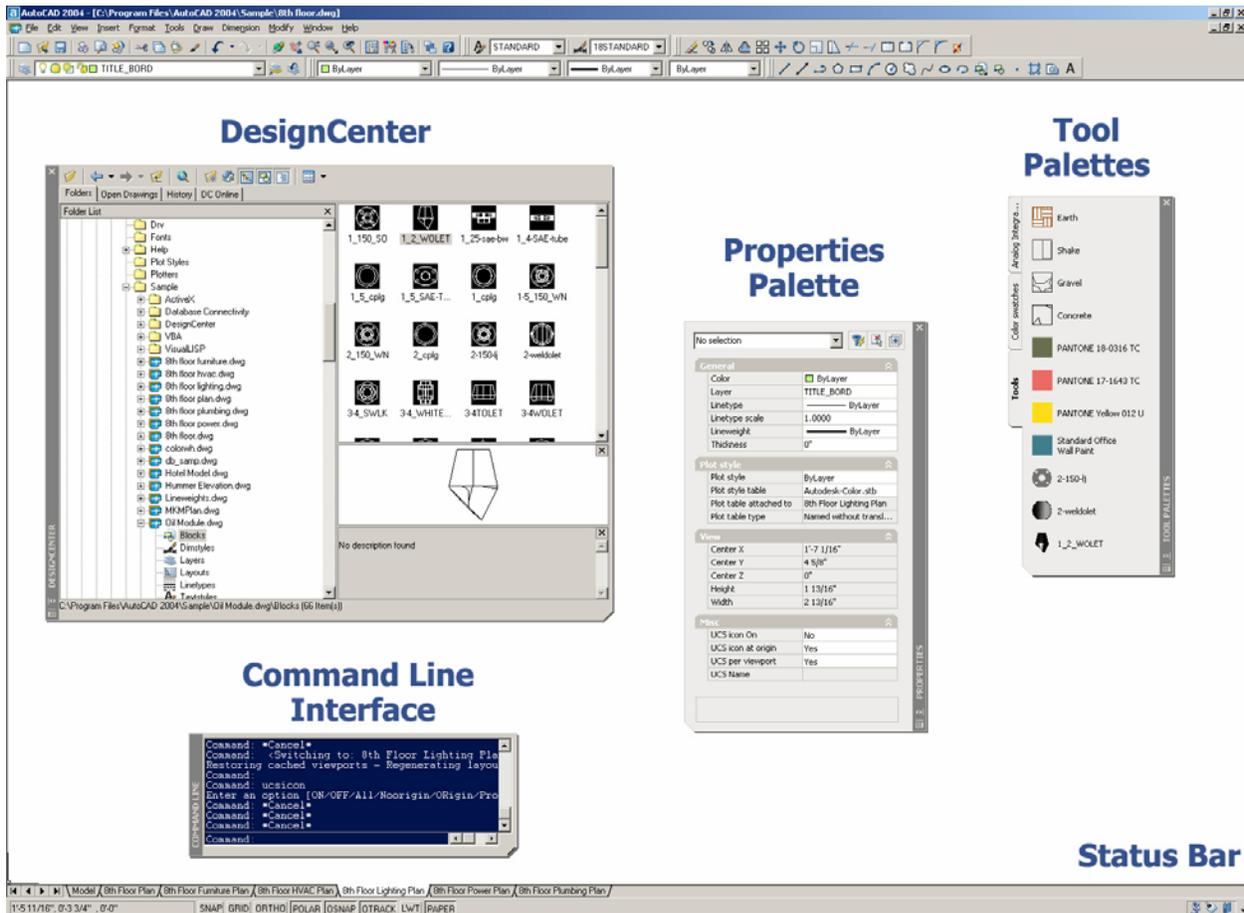
**DesignCenter™**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Modeless Dialog Box Functionality	Updated DesignCenter feature includes some of the new functionality offered by modeless dialog boxes, including auto-hide and docking.	Maintain easy access to drawing content while benefiting from the increased screen real estate offered by modeless dialog boxes.
DesignCenter Online	A new tab in the DesignCenter contains direct links to millions of symbols libraries and manufacturers' content on	Access content on a local drive, a network drive, or autodesk.com, all from a single location.

	autodesk.com—all in i-drop® format.	
Create Tool Palettes	Drag and drop content from DesignCenter site onto tool palettes or create new tool palettes based upon entire set of block libraries or drawing files.	Quickly create tool palettes with one click based upon files or directories of files.

**Properties Palette**

Feature	Function	Benefit
Modeless Dialog Box Functionality	Updated Properties Manager includes some of the new functionality offered by modeless dialog boxes, including auto-hide, docking, and content scrolling.	Maintain easy access to object properties while benefiting from the increased screen real estate offered by modeless dialog boxes.
Block Attributes	Ability to select, view, and modify attribute content of blocks.	Save time by editing block attribute values the same way you edit other block properties



**AutoCAD 2004 user interface elements**

**Multiline Text (MTEXT) Enhancements**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Frameless Editor	Multiline Text Editor dialog box has been replaced by a new frameless editor.	Easily view, size, position, and edit text relative to nearby geometry.
Text Formatting Toolbar	Apply style, font, and other text properties to characters and words within the text object.	Adjust text appearance as needed using tools that are familiar from other text editing applications.
Tabs and Indents	Indent text relative to the bounding box of the text element.	Easily create paragraphs with professional looking formatting.
Context Menu	Right click to access text formatting tools such as change case and symbols.	Easy access to commonly used tools.
Full Display Text Drag	Maintain full text fidelity when text object is moved, stretched, scaled, or rotated.	Accurately position text relative to graphical objects in the drawing.
Copy/Paste from Microsoft Word	Retain tabs and formatting when copying and pasting text directly from Microsoft Word into the Mtext editor.	Formatting is preserved when inserting text from Microsoft Word,

**Drafting Enhancements**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Express Tools	Utilize AutoCAD® Express Tools for additional functionality, including layer management, dimensioning, drawing, object selection, and object modification.	Increase productivity for the day-to-day drafter.
Revision Cloud	Create free-form or convert an existing object into cloud shapes.	Easily draw attention to modified sections of your drawings.
Enhanced Redo	Trace the history and restore multiple Undo operations.	Quickly restore previous drawing states without having to remember the specific operations that were performed.
Associative QDIM	The QDIM command can create true associative dimensions.	Quickly annotate geometry with associative dimensions.
PEDIT	Using PEDITACCEPT, you can remove the prompt for converting objects to polylines when you select an object that	Increase productivity when editing and joining objects into polylines by reducing the number of steps required.

	is not currently a polyline.	
Layout Tabs	Step through layout tabs by pressing the Ctrl Page Up or Ctrl Page Down keys.	Quickly access drawing layouts using familiar Windows® methods.

**Presentation Graphics**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
True Color	Specify color settings using true colors (24-bit color) with either the Hue, Saturation, and Luminance (HSL) color model or the Red, Green, and Blue (RGB) color model.	With over sixteen million colors to choose from, you can apply exactly the color you want to your AutoCAD objects.
Color Books	Specify colors using third-party color books (such as PANTONE®) or user-defined color books.	Use real-world color books for presentation quality drawings.
Gradient Fills	Specify a fill that uses a smooth transition between two colors or between darker shades and lighter tints of one color.	Create presentation drawings directly in the AutoCAD application without the need for additional software.
Shaded Viewport Plotting	Print shaded and rendered views directly from AutoCAD using the new Shaded Viewport options in the Page Setup and Plot dialog boxes.	Print shaded, 3D isometric views for presentation output with minimal steps.
Draworder	Changes to draworder are permanently stored, including within reference files.	Arrange the order of overlapping objects with the assurance that they will be saved and restored the next time you access the drawing.

## Share with Ease

### Performance

Feature	Function	Benefit
File Compression	Send/receive significantly smaller files (52 percent <sup>1</sup> ) as a result of new DWG optimized file format.	Save drawing storage space and increase the speed of file transfer operations such as emailing drawings or opening and saving drawings across a network.

### Working with Reference Files

Feature	Function	Benefit
External Reference Notification	Receive bubble notification and an icon alert in the status bar when an external reference has been changed or saved to the current drawing.	Multiple users can work on the same drawing set with the confidence that they are using the most current drawings.
Reference File Management	Edit the saved paths of selected references, including xrefs, fonts, standards, files and more!	Save time and confusion when moving drawings to a new location on a file server or renaming drawing folders. You can automatically manage all file relationships and dependencies globally, rather than updating reference paths on a file-by-file basis.
Search Paths	Attaching reference files in AutoCAD enables you to save a full or relative path or no path at all.	Assigning and searching for reference file paths is easier than ever.
XOpen	Quickly open an externally referenced drawing in a new drawing window by selecting it from the host file.	Benefit from the performance of working directly on a reference file while having the convenience of selecting the file from within the context of the host drawing.
RefEdit	Better control over your block references and views a full hierarchical tree of referenced geometry in the resizable Reference Edit dialog box.	Saves time and increases efficiency by minimizing the steps to edit a referenced file.

### CAD Standards

Feature	Function	Benefit
Standards Filter	Select any combination of standards plug-ins to monitor against, including dimension styles, text styles, layers, and linetypes.	Save time and minimize unnecessary violation alerts by focusing on only the types of standards that concern you.

Status Indicator	Receive unobtrusive, real-time, visual feedback regarding standards compliance of the current drawing from the standards icon on the status bar provides.	Quickly verify if the current drawing is standards compliant without having to run an audit. Easily access the standards checker as needed.
Real-time Notification and Repair	AutoCAD software immediately alerts you when your operation has caused a standards violation and automatically leads you to the standards checker where you can fix the most recent violations.	Increase drawing quality by identifying standards errors as they occur while simultaneously helping train users to comply with the standards.
Stand-alone Reports	Audit reports are bundled into a single html file.	Easily distribute standards audit reports via email

**Drawing Security**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Password Protection	Apply passwords to drawing files.	Assures the drawing creator that drawings cannot be opened or viewed by unauthorized personnel.
Digital Signatures	Apply digital signatures to drawing files.	Assures the drawing recipient that the drawing is authentic and unmodified since being signed by the creator.

**Publishing Drawing Sets**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Sheet Lists	Create drawing sheet lists by adding and removing any combination of drawings and layouts. Create multiple copies of specific sheets and rearrange the order of drawing sheets at any time.	Quickly and easily create complete drawing sets that contain the correct sheets in the proper order.
Page Setup	Each sheet can use its default page setup, or you can load a page setup from any other drawing or template file.	Plot to multiple devices using specific settings with minimal setup at plot time. You can easily create proper drawing sets with minimal instruction.
Drawing Sheet Descriptions	Save your list of drawing sheets to an external drawing sheet description (DSD) file for modification or reuse later.	Save time and ensure consistency by reusing previous drawing set lists.
Multisheet DWF	Publish all drawings from a drawing set to a single DWF file using the new DWF™ 6 (Design	Minimize the number of files being transmitted and avoid confusion regarding file order for viewing and

	Web Format™) file format.	printing. Multi-page files can be easily viewed and printed in order with Autodesk's free DWF viewer, Autodesk® Express Viewer.
Password Protection	Apply an optional password to the drawing sets created using the DWF file format.	Drawings are secure because unauthorized personnel cannot view or print DWF-based drawings.
Batch Plot	Plot multiple drawings in the specified order to the devices specified in the page setup of each sheet.	Create multiple plots in the proper order with minimal interaction.
Log File	Create an optional log file listing the sheet name, layout name, full drawing file path, and status for each sheet in the drawing set.	Quickly analyze the publish/plot status of each drawing in the set helping to reduce errors and confusion resulting from incomplete or missing plots.
Automation	The command line interface +PUBLISH enables you to pre-populate the Publish dialog box with an existing drawing set list. The -PUBLISH command enables automation using scripts.	Save time by minimizing your interaction with the software.

**Electronic Viewing**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Autodesk® Express Viewer	A small, fast, viewer with simple, easy-to-use tools for anyone who needs to quickly view and print to-scale DWF files.	Creators and consumers of design information can readily access design drawings for review electronically or in print.
DWF Support	Autodesk Express Viewer supports viewing for all DWF file formats including the new DWF 6.	View multisheet DWF files as well as any previous DWF versions with a single viewer.
Lightweight	The install file for Autodesk Express Viewer is less than 2MB.	Minimize download time and encourage the use of secure DWF files.
Distributable	Autodesk Express Viewer can be distributed both as an ActiveX control for Microsoft® Internet Explorer and as a stand-alone application.	Creators and consumers of design information can easily install and distribute this tool and view project files throughout the life of the project.

## AutoCAD 2004 Features and Benefits

Display Options	Control the display of drawing content by selecting from multiple sheets, layers, and named views, and various zoom options.	Easily manipulate the display area using familiar and intuitive tools enabling you to view and plot just the information you want without having to open the drawing in AutoCAD.
Print/Plot	Print drawings with the same fidelity as if plotted directly from AutoCAD. Printing options include: Fit to page, current view, print to scale, tile drawing across multiple pages, display tiles within view pane, print multiple pages or page range, collate pages, reverse page order, and print in black and white only.	DWF recipients have control over their printed output without the need for AutoCAD software, while the DWF creator is assured that the actual design data remains secure and unchanged.
Application Extensibility	Autodesk Express Viewer can be run as an embedded ActiveX control within the following environments: embedded Microsoft Internet Explorer (5.0+), Microsoft Word, PowerPoint®, Visual Basic®, VS.Net, etc.	You can embed the viewer within Microsoft applications to show dynamic viewing of design data.

### Communication Center

Feature	Function	Benefit
Status Bar Icon and Notification Balloon	The Communication Center provides direct notification for product-related information and is available via an icon on the status bar.	Confidence that you will be notified when important announcements happen.
Configuration Settings	Configure the Communication Center by specifying geographic location, frequency of updates, and specific information to be displayed.	Tailor the communication center so that it offers the most valuable information for your specific needs.
Live Updates	Receive instant notification when an update or maintenance release is available for your AutoCAD software.	Ensure that your AutoCAD installation is always up-to-date.
Subscription	Receive notification when a new extension or announcement is available.	Ensure that you make the most of your subscription membership.

Information Channels	Receive direct links to technical support information, articles, software tips, and product-related announcements.	Stay current with information relevant to your product and location.
CAD Manager Control	Selectively enable, disable, or configure the Communication Center on a user-by-user basis.	Control which users have access to information on the Internet.

**Access to Project Hosting**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Buzzsaw™ Integration	Autodesk® Buzzsaw™ project hosting services now link via a standard drive letter.	User-friendly means to access project information on the Buzzsaw hosting site.

## Manage with Efficiency

### Installation

Feature	Function	Benefit
CD Browser	A new browser installation interface enables you to find, view, and install various components of the installation CD.	Provides easy access to the stand-alone and network installation versions of AutoCAD software, and to all the other valuable software tools on the AutoCAD 2004 CD.
Side-by-Side Installation	AutoCAD 2004 can be installed and run alongside all other AutoCAD-based software products, enabling you to operate your existing production software during the transition.	Provides a smoother transition of user knowledge as well as project data.
Microsoft Windows Logo Certification	AutoCAD 2004 is certified under the "Designed for Windows XP - Optimized for Enterprise" Microsoft logo program.	Ensures that AutoCAD runs smoothly in the Windows XP corporate environment, including the ability to run AutoCAD software as a limited-rights user.
Autodesk Product Manager	Performs inventory of installed Autodesk software on a PC, LAN, or WAN from a single location.	Enables the CAD or IT manager to easily keep track of installed software assets to ensure maximum return on technology investment and avoid excess software purchases.
Script Generator	Produces MSI install scripts for Autodesk products.	Easily deploy Autodesk products in a 'silent' background mode.
CAD Manager Control Utility	The CAD Manager Control Utility can be used to disable DesignCenter Online and the Communication Center.	IT and CAD managers can maintain software consistency among users and avoid potential problems by restricting user access to internet-based features.
Power User Rights	The Power User requirement has been removed for running AutoCAD on Windows 2000 and Windows XP.	Users can run AutoCAD software while having limited user access at the OS level.
Help>About Box	The About Box now includes product information such as serial number, version number, and more.	Quickly find important product information for AutoCAD software.

**Software Deployment**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
Network Installation Wizard	The Network Installation wizard (NIW) provides more flexibility for creating and modifying administrative deployment images.	Saves time by enabling CAD Managers to configure their AutoCAD installations just the way they want without many manual workarounds required by earlier versions of AutoCAD.
Server Configurations	Using the NIW, easily choose from various licenser server options including: Single, Distributed, and Redundant.	Create an optimum server configuration with minimal effort.
Custom Deployment Tools	New tools in the NIW enable CAD managers to specify search paths and to easily access custom templates, drivers, menus, etc.	Save time and resources with the ability to quickly and easily set up the AutoCAD desktop to meet your corporate standards.
Administrative Controls	The NIW enables the system administrator to create deployments which control the access users will have to internet functionality such as live updates and DesignCenter Online.	IT or CAD managers can maintain software consistency among users and avoid potential problems by restricting user access to internet-based features.

**Software Licensing**

<b>Feature</b>	<b>Function</b>	<b>Benefit</b>
License Borrowing	The Autodesk Network License Manager (NLM) provides the ability for a network license to be "borrowed" by a user for a limited amount of time and returned to the server when they reconnect to the network.	NLM users can temporarily work without access to the Network License Manager using the client-installed version of AutoCAD.
Early License Return	The Autodesk License Borrowing Utility enables someone that has borrowed a license, for a specified amount of time, to return the license early.	Return unneeded licenses as soon as possible making them available for other users to access.
License Time Out	The NLM provides the ability for an administrator to set a "time out" limit to return inactive network licenses to the server	Enables more efficient management of network licenses.

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