EXPERTCAD

ExpertCAD 2013 Release Summary
March 2013

Overview

ExpertCAD 2013 is major release that includes enhancements as well as customer requested software modifications and corrections. This release summary briefly describes the software changes for this release. this includes changes and corrections for ExpertCAM and ExpertView.

Platform Support

The 2013 release is compatible with Windows 8 and Windows 2012 Server from Microsoft. Should you choose a new computer with Windows 8, Windows Server 2012 or upgrade your operating system to either of these, the 2013 release will install and run just fine. Previous versions *will not* run on Windows 8 or Windows Server 2012 because the software does not recognize these operating systems.

The table below lists the supported operating systems for ExpertCAD 2013:

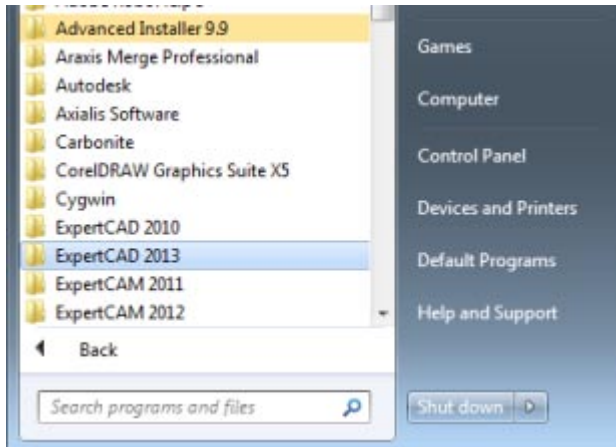| Operating System	32-bit	64-bit	Minimum Revision Level
Windows 8	✔	✔	All
Windows Server 2012	N.A.	✔	All
Windows 7	✔	✔	All
Windows Vista*	✔	✔	Service Pack 2
Windows Server 2008	✔	✔	All
Windows XP	✔	✔	Service Pack 3
Windows Server 2003	✔	✔	Service Pack 2
Windows 2000	✘	✘	None

*Support for Windows Vista is ending. This will be the last major release that will support this operating system. Future releases will not be subjected to our quality assurance processes for this operating system. This means that future versions may or may not install or run properly on Windows Vista. As recommended by Microsoft, you should upgrade to Windows 7 or Windows 8 to assure continued support.

Note that Windows RT is *not* supported. Windows RT is a variant of Windows 8 that runs only on the ARM processor architecture whereas all other variants of Windows run Intel x86 architecture. ARM processors used for smart phones and tablet computers where low power consumption takes priority over processing power. Support for Windows RT and the ARM architecture may appear in a future release if there is sufficient commercial demand and the Microsoft Win32 run-time is provided to the development community (currently all Windows applications must be substantially rewritten specifically for Windows RT).

Microsoft Surface RT is an example of a tablet computer that is *not* supported.   However Microsoft Surface Pro is a tablet computer that is supported because it uses an Intel processor and runs the Windows 8 operating system. Be careful to check the specifications before you purchase a tablet (or any computer for that matter) to make sure it has an Intel x86 architecture running Windows 8. If you have any questions or in doubt, please call AMT Software customer service for help.

Installation

ExpertCAD 2013 will be installed on your system as though it is a new application. It is not necessary to remove any older version of ExpertCAD from your computer. The installation program will not overwrite applications programs from any previous installation of ExpertCAD. A separate program group – ExpertCAD 2013 – is created and shown in the Windows start menu.

This Windows 7 computer has older versions of ExpertCAD and ExpertCAM installed side-by-side with the ExpertCAD 2013 release.

There are no changes to software licensing. Your current USB key or floating license will allow the 2013 version to run as well as all previous versions.

ExpertCAD

The 'pushnearest' primitive command has been corrected to function properly if a small hit radius is specified as a parameter.

Dimensions that don't create extension lines or dimension lines no longer cause the 'fit' command to stop functioning.

When changing the scale of a newly created model view, construction lines added to the drawing would not extend properly to the boundary of the current sheet size. This defect has been corrected so all entities are correctly sized.

The command to fit the drawing to the screen has been corrected to ignore lines that do not have a valid bounding box (e.g. the current line with a single point has zero area).

In input invalid layer naming conventions are detected and corrected to avoid output of a spurious invalid usage error message.
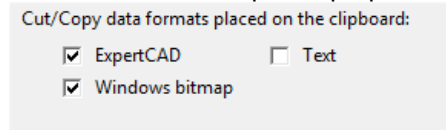
A dimension type parameter has been added to the class 'dimens' to allow for specific type(s) of dimension(s) to be specified as part of the class (e.g. delete (dimens 8) (dimens 9) would delete all horizontal and vertical ordinate dimensions).

Adobe PDF output has been corrected to properly rotate text entities in the event the drawing must be rotated 90 degrees for output. Previous versions could flip the text to keep it readable which is not appropriate behavior in this case.

Output in Adobe PDF format has been corrected to generate lines with the proper dash pattern in all cases. Previous versions could omit line dashing in cases where there were many individual lines with the same dash pattern in a drawing.

The 64-bit edition of ExpertCAD has been corrected to properly export a drawing as a bitmap file. The previous edition would fail on a 32-bit true color display.
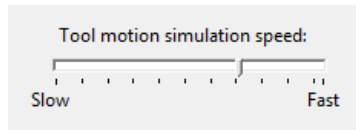
Options to specify what file formats to place on the system clipboard when you use Cut or Copy have been added to the File I/O tab of the Tools/Options properties dialog:

By default ExpertCAD drawing data and a bitmap image of that data will be placed on the clipboard. If you wish to include all text in the selection to be placed on the clipboard as plain text, enable the Text option on the dialog.

ExpertCAM

A slider control has been added Sequences tab of the Tools/Options property sheet to control the cutter path simulation speed:

The previous implementation did not offer a wide enough range to allow for variances in the drawing speed of different computer configurations.

New programs have been added to the distribution for ExpertCAM to allow configurable post processors to be run as in a stand-alone mode:

    ExpertPostMill.exe – configurable mill post processor
    ExpertPostLathe.exe – configurable lathe post processor

Below is an example of how to run these programs in a command prompt window:

C:\>

C:\>cd "Program Files\AMT Software\ExpertCAD 2013\bin"

C:\Program Files\AMT Software\ExpertCAD 2013\Bin>ExpertPostLathe.exe -t "c:\temp\tapefile.txt" -e "C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc.e" -m "C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc.m" -c "c:\temp\x.clf" -p "c:\temp\printfile.txt" -n "C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc"

Configurable Lathe Post Processor 2013 Copyright (C) 1983-2013 AMT Software LLC

Post processing job parameters:
    Post processor configuration file: C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc
    Input CL data file: c:\temp\x.clf
    Output tape file: c:\temp\tapefile.txt
    Print file: c:\temp\printfile.txt
    Event file: C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc.e
    Macro file: C:\ProgramData\AMT Software\ExpertCAD\ExpertCAM Posts\Lathe\Fanuc\Fanuc.m
Post processing started.
Post succeeded in producing a tape file.
C:\Program Files\AMT Software\ExpertCAD 2013\Bin>

Using the stand-alone programs facilitates the development of the correct configuration files for a post processor as any warnings or errors are output by the program to the command prompt window.

AutoCAD Translation

The AutoCAD translators have been updated to include support for AutoCAD 2013 data files. The option to export DWG files in AutoCAD 2013 format has been added to the Import/Export tab of the Tools/Options properties dialog for ExpertCAD.

A correction for a discrete defect with placement of block reference has been implemented to choose the proper location when the position property does not agree with the transformation matrix associated with the block reference.

A new option '-a' has been added to the AutoCAD to ExpertCAD translator. '-a' emulates the AutoCAD _audit command. Audits the input file and if possible corrects all problematic entities prior to converting the file to ExpertCAD.

The AutoCAD to ExpertCAD translator has been modified to omit the output of redundant text buffer definitions.

AutoCAD DXF format files that begin with multiple comments (999 entities) are now recognized as valid DXF files. Previous versions would not handle multiple comments properly and reject the file as being invalid.

When converting an ExpertCAD drawing that contains text or a dimension string that ends with a '^' character could cause a program crash. This has been corrected for the 2013 release.

Touch Screen Support

Support has been added for touch screen displays. In general, your finger acts as the left mouse button when you touch the screen in the graphics area with the addition of Microsoft supported gestures:

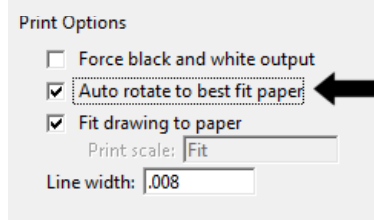| Gesture	Action
	Tap – a single tap on the screen in the graphics area drops a point. A tap on an icon executes the command associated with that icon.
	Zoom In, Zoom Out – using 2 fingers, moving towards each other will zoom into the model; moving away from each other will zoom out.
	Tap and Drag in Graphics Area - just like the left mouse button, this allows you to make a cursor stroke to execute a command.
	Tap and Drag in Icon Area - just like the right mouse button, this allows you to track the icons to choose one to execute.
	Center – a 2-finger tap will center the view at approximately the same point indicated.
	Press and Hold – same as the middle mouse button a press and hold gesture posts the context popup menu.

Touch screen support is available only for the Windows 7 or later operating system. Older operating systems do not support touch screens.

Printing and Plotting

WinPlot has been enhanced to allow the color of a line to be output based on line style. For the capability codes s0-s63 and a0-a63 the line style and red, green, blue components of the color are available as arguments.

WinPlot no longer defaults to line style 0 as the default. This ensures that if a line style 0 is encountered as the first style in a plot file, the s0 (or a0) capability code will be executed to produce the proper output for style 0.

A new option has been added to the Print/Plot tab of the Tools/Properties dialog to allow ExpertCAD to automatically rotate the printed output to best fist the paper size being used:

If you choose the enable automatic rotation, the long side of the printed output will be aligned with the longest edge of the paper regardless of the portrait or landscape setting in your printer properties dialog.

Custom paper sizes can be added as an option for Adobe PDF output. In your ExpertCAD.cfg file, specify the additional paper sizes you wish to add using the command add-pdf-page-size <name> <width in inches> <height in inches>. For example:
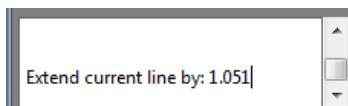
```
add-pdf-page-size "Architectural C" 18 24
add-pdf-page-size "Architectural D" 24 36
add-pdf-page-size "Architectural E" 36 48
```

Would add these paper sizes as options for PDF output and will appear as paper size options in the Adobe PDF Conversion Settings dialog. Note that the paper width and height must be specified in inches.

The default paper size for Adobe PDF output is determined by examining the locale setting established by the Windows operating system.
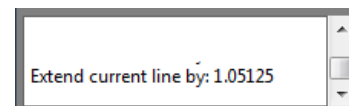

Maintenance

The ScriptLink prompt command has been corrected to allow the for appending characters to the default response to the prompt by hitting the right arrow key first:

A default is provided for this prompt. To append to it….

…hit the right arrow key on your keyboard…

now you can append to the default provided with the prompt.

Previous versions regarded the arrow key as any other keystroke and erased the default prompt.

The ScriptLink command 'panel-repost' has been corrected to properly recomputed the content and repost the designated dialog. Previous native Windows versions of the applications did not honor this command.

Floating license installation has been corrected to configure the Windows firewall properly regardless of the option(s) chosen during the installation process.

Licensing error dialogs have been revised to always post on top of the application splash screen.

When using automatic file extensions, the file extension will always be appended to the file name (unless the file already has the same extension) instead of replacing the current extension. For example, when writing a PDF file named "acme.001" the resulting file would be named "acme.001.pdf" instead of "acme.pdf".

The color editor dialog has been revised to display correctly is the computer display is set to be 125%. In previous versions at 125% the OK/Cancel/Save buttons would not be visible.

A new ScriptLink primitive command '.macro' has been added that allow a macro definition to override a read-only macro or primitive command.

When using the mouse scroll wheel to scroll through messages in the message area will revert to the customary zoom function when the cursor is moved into the graphics area. Previous versions would constrain the mouse wheel to the message area regardless of which area of the application had focus.

Resolved Software Requests

When you report a problem or request an enhancement, our customer service representative will input your request into our software lifecycle management system and give you an ID number. Listed in the table below are the ID number and a synopsis of each record from our system that has been discharged for this release.

Record ID	Synopsis
133	The mouse scroll wheel will not zoom in and out after using it to scroll through messages in the message area.
161	Block references in this AutoCAD drawing are shifted out of position when read into ExpertCAD.
175	After creating a model view and changing the scale in ExpertCAD, newly created construction lines don't extend to the current sheet size.
2963	Add the ability to perform an audit of an AutoCAD file to the AutoCAD to ExpertCAD translator.
2966	The OK, Cancel and Save buttons are missing on the color editor if the display is set to 125% on Windows 7.
2967	The 'pushnearest' primitive command group in ExpertCAD doesn't work correctly if a small hit radius is specified.
2969	Execution of this custom macro causes the 'fit' command to fail in ExpertCAD.
2968	ExpertCAM is not generating the proper motion when the split moves option is used to apply cutter compensation.
2969	ExpertCAD is not computing the proper scale for the 'fit' command after execution of this custom macro.
2970	Default name for output of a PDF file replaces the edit file extension with '.pdf' instead of appending '.pdf' to the name.
2971	Correct memory leak when new macros or text buffers are created.
2972	The AutoCAD to ExpertCAD translator outputs redundant text buffer definitions.
2974	Add ScriptLink primitive command '.macro' to allow a macro definition to override a read-only macro or primitive command.
2975	When using a default extension for file names, always append to the specified file instead of replacing the current extension.
2976	Dimensions that don't create extension or dimension lines prevents the 'fit' command from working properly.
2977	Add dimension type argument to the class 'dimens' in ExpertCAD.
2982	Reading this drawing into ExpertCAD causes an error message to be output when restoring the named layers.

2983	Licensing error message dialog is being posted underneath the splash screen instead of as the top-most window.
2984	Revise installation to always include the client.wyc file to enable the Check for Updates feature.
2988	Floating license installation omits configuration of the Windows firewall if the 'Skip' option is chosen during installation.
2989	On installation always associate the '.ddd' file extension with ExpertCAD.
2991	Add the ability to specify custom paper sizes for Adobe PDF output.
2992	Choose the proper default for PDF paper size based on the locale setting established by the Windows operating system.
2993	A garbled error message is output when setting the text buffer LN_COLOR to an invalid number in ExpertCAD.
2996	Add support for reading and writing AutoCAD 2013 data files.
2997	Add support for Windows 8 and Windows Server 2012 operating systems.
2998	ExpertCAM is not saving the setting for zero tool length setting to the configuration file correctly.
2999	Modify WinPlot to allow the line color to be specified when the line style changes.
3000	WinPlot should not default to style 0. There should be no default to ensure that the commands associated with s0 (or a0) are executed.
3001	At program start, check the users' temp directory to make sure it is writeable. If it isn't, post a warning dialog.
3003	Text entities are not being output correctly to Adobe PDF documents when the output must be rotated 90 degrees.
3004	Add an option for printing to automatically rotate the output to best fit the paper size being used.
3005	AutoCAD DXF files that begin with multiple comments are not recognized as valid DXF files.
3007	The 64-bit edition of ExpertCAD is failing to export a bitmap file.
3008	Allow the user to choose to include or omit text from being placed on the clipboard when using Cut or Copy in ExpertCAD.
3009	The primitive command panel-repost is not working correctly.
3011	The fist argument for line style - %0 – is not being passed as an argument correctly to the WinPlot capability codes s0-s63 and a0-a63.
3016	Line style 10 is not showing the proper dash pattern when this file is written as a PDF file.
3017	Offer more control over the speed at which cutter path is simulated in ExpertCAM.
3018	Converting an ExpertCAD file to AutoCAD format that has text string(s) with a '^' character at the end of the string causes the program to crash.
3019	Events for motion to the home position are not being processed properly for configurable post processors developed for ExpertCAM.
3020	Include executable images (.exe) programs to run configurable post processors outside of ExpertCAM to aid in the development and debugging of post processor configuration files.
3022	ExpertCAD is not correctly handling incorrect definition of dimension characters that were saved in files generated by very old versions of ExpertCAD.