
ProductView Express Documentation

1.0 Introduction

ProductView Express, which supports Pro/ENGINEER Wildfire 2.0, is now available. Using ProductView Express, engineers and others involved in the product development process can view Pro/ENGINEER parts, assemblies, and all drawing types without having Pro/ENGINEER. ProductView Express is available as a Web browser plug-in for Windows, UNIX, and Linux.

1.1 Viewing Parts and Assemblies

Multithreaded implementation enables incremental loading, so you can interact, pan, zoom, and fly-through with designs as they are streaming over the Internet or loading from your disk. ProductView Express uses the PTC patent-pending shrinkwrap technology to enable users to view lightweight models of large assemblies. Using the **Select and Navigate** feature, you can select any sub-assembly or part of an assembly to be the next model you want to load into ProductView Express. A navigation history is available, so you can jump backward or forward, if necessary.

1.2 Viewing Drawings

You can use ProductView Express to view all Pro/ENGINEER drawing types, including formats, reports, diagrams, and layouts. A spin box allows you to navigate drawing sheets while you pan and zoom to inspect any item of interest. As with parts and assemblies, you can use the navigation history to quickly visit already viewed sheets.

2.0 Configuring ProductView Express

With ProductView Express, you can view Pro/ENGINEER objects created in Pro/ENGINEER Releases 2000i through Wildfire 2.0.

To view parts and assemblies, you must set the following config.pro option:

save_model_display—recommended setting: **shading_lod**

Note: After setting this option, you must reload the objects into Pro/ENGINEER and save them using the configuration option to view the data in standalone ProductView Express. You must back up assemblies for this configuration option to act on every part and subassembly. This setting is the default in Pro/ENGINEER Wildfire 2.0, so you do not need to set the config.pro option in Pro/ENGINEER Wildfire 2.0.

To view drawings, formats, layouts, reports, and diagrams, you must set the config.pro option:

save_drawing_picture_file—recommended setting: **embed** or **both**

To view sections, you must set the following config.pro option:

sketcher_save_preview_image—recommended setting: **yes**

Note: After setting these options, you must reload the objects into Pro/ENGINEER and save them using the configuration option to view the data in standalone ProductView Express.

Your Web server must be configured to export Pro/ENGINEER files as MIME-type files. You must associate all viewer-supported Pro/ENGINEER file types with the following MIME type during the viewing operation: application/x-ptc-part. If this association is not made, the Pro/ENGINEER file is displayed as text only. If you need more information, log a call using the [PTC Technical Support Call Logger](#).

3.0 Browser and Platform Requirements

The following browsers are supported for ProductView Express:

- Windows 2000, XP (32-bit):
 - Internet Explorer 6.0 Service Pack 1 and later
- UNIX and Linux (PVX will be a 32-bit executable on these operating systems):
 - Mozilla 1.0

The following platforms are supported for ProductView Express:

- Windows 2000, XP 32-bit (Home and Professional)
- SGI IRIX64 6.5.18
- Sun Solaris 8, 9 (64-bit only)
- HP HP-UX 11.0, 11i
- HP Linux Red Hat 7.3

4.0 Downloading and Installing ProductView Express

Download ProductView Express from the PTC Web site at www.ptc.com/products/pvexpress/. Follow the instructions to save the downloaded file to a temporary directory on your system.

4.1 Windows

When the download is complete, navigate to the directory in which you saved the file. Double-click the file, and follow the installation steps in the setup wizard.

4.2 UNIX and Linux

For complete installation instructions, please reference the readme.txt document that is included in the downloaded ProductView Express .tar file.

Any updates to ProductView Express are available on the PTC Web site. When you open ProductView Express, it automatically searches the PTC Web site for updates and prompts you to download the most current version, if needed.

5.0 Using ProductView Express

You can open Pro/ENGINEER objects using your Web browser or Windows Explorer.

Using a Web Browser:

1. Navigate to or type the path to the directory that contains the Pro/ENGINEER object or objects you want to view.
2. Select a file name. ProductView Express opens automatically and displays the selected file.

3. Use the Forward and Back buttons in the browser to access the directory listing and view other Pro/ENGINEER objects.



Using Windows Explorer:

1. Navigate to the object that you want to view.
2. Double-click the object. ProductView Express opens automatically.

Alternatively, you can select and highlight an object, using the Right-Mouse-Button (RMB) then select 'View with ProductView Express' from the RMB menu. **Note:** That this option will show up only if you have Product View Express installed on your Windows machine.


When you open an assembly (.asm) file, the top-level assembly loads, and the remainder of the assembly is loaded in the background. ProductView Express displays a miniature representation of the assembly and its subassemblies during the loading process.

5.1 Working with Views and Navigational and Display Modes

You can switch between orthographic and perspective projection views by clicking  (Orthographic) or  (Perspective).

ProductView Express has two navigational modes:


- Hot mode (Default Setting)—You can spin the model around the default spin center (center of the model). The spin center appears only when you press the middle mouse button.
- Dynamic mode—You can spin the model about any point. The spin center is visible at all times.

When you open ProductView Express the Spin display mode  is in the Hot navigational mode


The Dynamic navigational mode has two display modes:

- Dynamic Spin mode
- Fly-through mode

While in the Hot navigational mode, you can enter the Dynamic Spin display mode by pressing CTRL + SHIFT + middle mouse button. To return to the Hot navigational mode, press CTRL + SHIFT + middle-click. The spin center disappears, and you are returned to the Hot navigational mode.


The other Dynamic display mode is Fly-through, . Using the Fly-through display mode, you can move the view closer to or farther away from the object and move the camera about or inside the object.

5.1.1 Using the Spin Display Mode

To activate the Spin display mode, click . The following chart describes navigational controls.


Note: You cannot perform fly-through tasks in the Spin display mode.

Input Device	Input Operation	System Response	
		3D Objects	2D Objects
Three-button mouse	Hold middle mouse button and drag	Rotate—Hot Mode (3D)	Pan
	Press CTRL + middle mouse button and drag vertically	Zoom	Zoom
	Press CTRL + middle mouse button and drag horizontally	Rotate (2D)	No action
	Press SHIFT + middle mouse button and drag	Pan	Pan
	Press CTRL + SHIFT + middle-click	Dynamic Spin Mode	No action
Three-button wheel mouse	Click the wheel and drag	Rotate—Hot Mode (3D)	Pan
	Press CTRL + wheel and drag vertically	Zoom	Zoom
	Press CTRL + wheel and drag horizontally	Rotate (2D)	No action
	Press SHIFT + wheel and drag	Pan	Pan
	Roll wheel	Zoom	Zoom
	Press CTRL + SHIFT + click the wheel	Dynamic Spin Mode	No action
Two-button mouse	Press right mouse button and drag	Rotate—Hot Mode (3D)	Pan
	Press CTRL + right mouse button and drag vertically	Zoom	Zoom
	Press CTRL + right mouse button and drag horizontally	Rotate (2D)	No action
	Press SHIFT + right mouse button and drag	Pan	Pan
	Press CTRL + SHIFT + middle-click	Dynamic Spin Mode	No action

To refit the object in the Viewer window, click  (Zoom to Fit).

Note: If you are in the Dynamic navigational mode, you cannot drill down into an assembly. To do this, switch to the Hot navigational mode.

5.1.2 Using Fly-through Mode

To activate the Fly-through display mode, click . The following chart describes navigational controls.


Note: You cannot spin, pan, or zoom in the Fly-through display mode.

Input Device	Input Operation	System Response
Three-button mouse	Middle-click	Starts movement toward object
	Press and hold middle mouse button	Increases speed of movement towards the object.*
	Press CTRL and hold middle mouse button	Increase speed of movement away from the object *
	Double-click middle mouse button	Stops all movement
	Press left mouse button while moving	Rolls object to the left
	Press right mouse button while moving	Rolls object to the right
Three-button wheel mouse	Click wheel	Starts movement toward object
	Press and hold wheel	Increases speed of movement towards the object.*
	Press CTRL and press wheel	Increase speed of movement away from the object *
	Double-click wheel	Stops all movement
	Press left mouse button while moving	Rolls object to the left
	Press right mouse button while moving	Rolls object to the right
Two-button mouse	Right-click	Starts movement toward object
	Press and hold right mouse button	Increases speed of movement towards the object *
	Press CTRL + right mouse button	Increase speed of movement away from the object *
	Double-click right mouse button	Stops all movement

* When moving toward an object, hold the middle mouse button or the wheel to increase the speed of movement toward the object. Press CTRL and hold the middle mouse button or the wheel to decrease the speed until your position is stationary. If your position is stationary, press CTRL and hold the middle mouse button or the wheel to increase the speed of movement away from the object. When moving away from the object, press and hold the middle mouse button or the wheel to decrease the speed until your position is stationary.





At any point during Fly-through, you can navigate around the object by moving the mouse.

Note: You will not have the full control of Fly-through with a two-button mouse that you have when using a three-button mouse.

To refit the object in the Viewer window, click  (Zoom to Fit).



5.2 Changing the Rendering Style

To change the rendering style, click one of the following options:

-  Shaded
-  Wireframe
-  Hidden Line
-  No Hidden Line



Note: Depending on the configuration options used when the Pro/ENGINEER objects were saved, some of the rendering styles may not be available. In this case, the default rendering style will be automatically switched to the best style possible.

5.3 Viewing Assemblies, Subassemblies, and Component Parts

- While loading an assembly, you can use the **Select and Navigate** feature to select an entity in the assembly, such as a subassembly or part, to be the next entity loaded into ProductView Express. . In order to use this feature, click on the part or sub-assembly you want to be displayed,
- Once the assembly is fully loaded, there are two ways to view objects of that assembly
 - **Part Viewing** (Default Setting) – Select and click on the part that you would like to view in ProductView Express. (This object is available in both Spin and Fly-through display modes.)
 - **Sub-Assembly Viewing** – While holding down the Shift button, select and click on a component, if that component is part of a sub-assembly, that sub-assembly will be viewed in ProductView Express. If the component is not part of any sub-assembly, then only that component will be displayed in ProductView Express. This new capability enables you to traverse through the assembly structure of your data.
- To switch between the object view history, use the Forward and Back arrow buttons in ProductView Express ( or .

5.4 Viewing Drawing Files

You can view Pro/ENGINEER drawings using the following methods:

- Type a sheet number into the spin box. ProductView Express displays the specified sheet.
- Step through the sheets in sequential order, using  and . Use the Web browser Forward and Back buttons to step through your sheet view history. You can pan and zoom to inspect items of interest.

5.5 Obtaining Maximum Graphics Performance Using FPS

You can maximize graphical display performance by setting the FPS (frames per second) rate. The FPS rate is the number of times ProductView Express redraws the image in one second. The higher the FPS rate, the better the graphical display when you perform operations such as spinning or zooming.

To set or change the FPS rate, click  and select a new rate from the list.

5.6 Controlling the Size of the Viewing Area

You can control the size of the viewing area in the Web browser by using the following environment variables. You must set the variables before starting the browser:

- **PTCPVX_WIDTH**—Specifies the width in pixels. The range of values for this variable is 600 through 1000.
- **PTCPVX_HEIGHT**—Specifies the height in pixels. The range of values for this variable is 600 through 1000.