XVL Player Tutorial

For Version 23.0 and later

Lattice Technology, Inc.

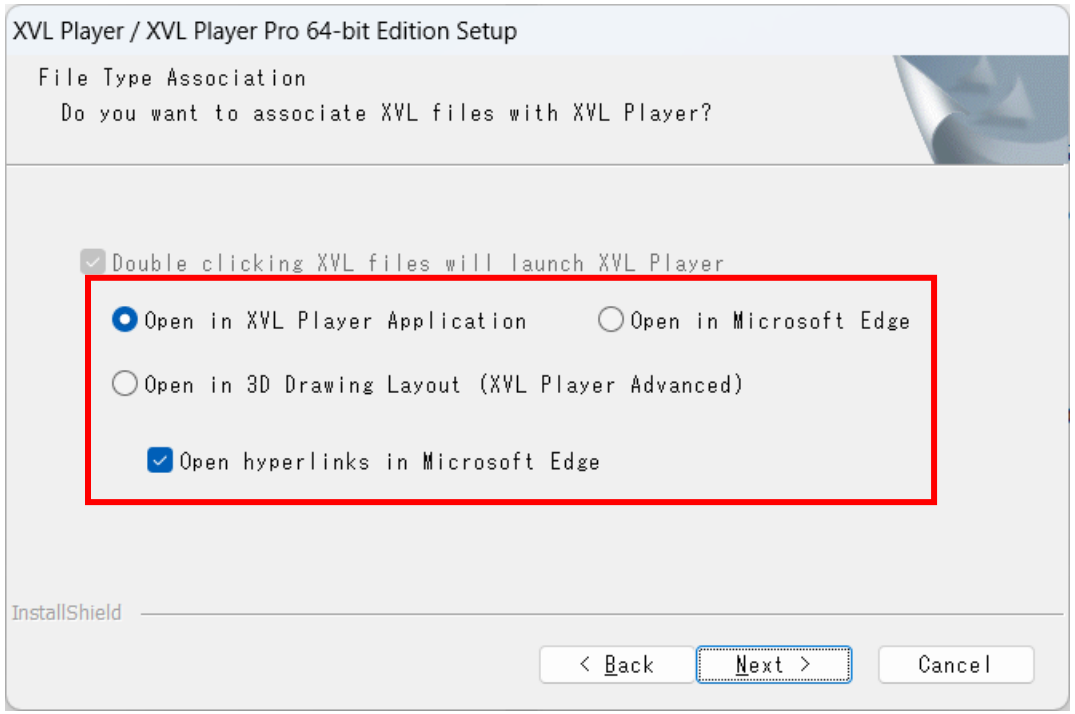
Table of Contents

Overview

Table of Contents

Installation

1. Install XVL Player by double-clicking the installation file.
2. In the installation wizard, you can choose the default viewer application for XVL files.

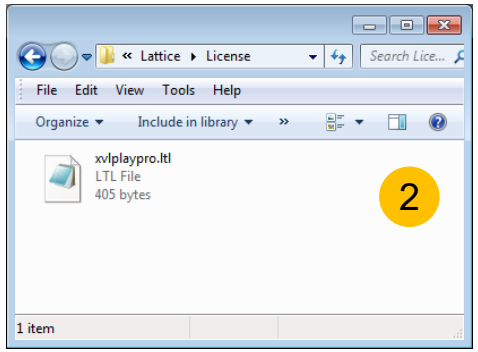


*** XVL files will be opened in the specified application when double-clicked.**
*** XVL files can be drag-and-dropped onto any of the applications for viewing.**

License Setup

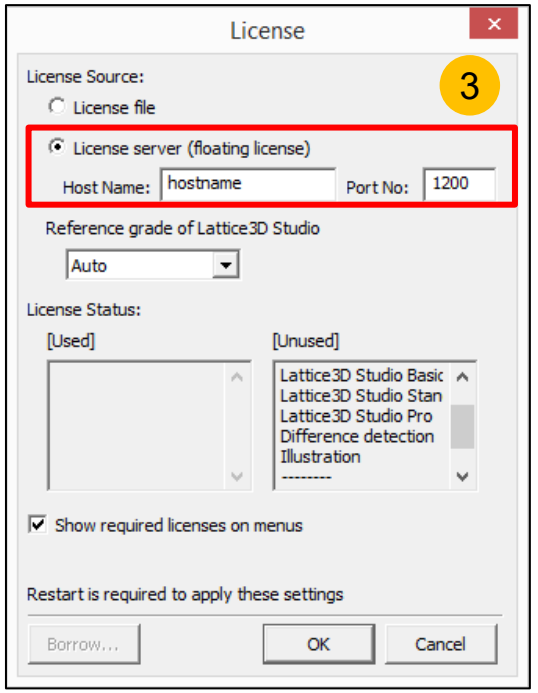
To install a node-locked license file:

1. Select **Start > All Programs > XVL Player (Ver. 9 or later) > License Folder** to open the license folder.
2. Place the license file in the license folder.



To connect to a floating license server:

3. Right-click and select **Help > License…** to bring up the **License** dialog box.
4. Change the License source to **License server**.
5. Enter the **Host name** and **Port No** of the license server.
6. Select **OK** to save the changes.



*** To activate XVL Player Pro or XVL Studio based features, the corresponding license file(s) must be installed.**

Table of Contents

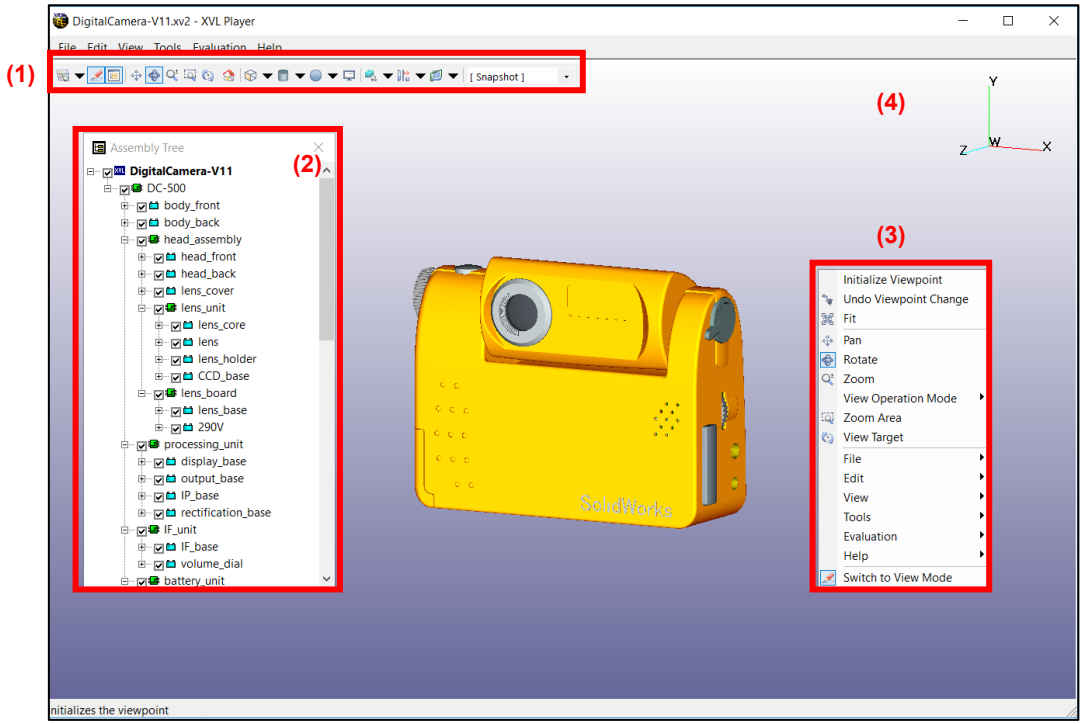
XVL Player Window

(1) Toolbar
Frequently used functions such as view manipulations and controls are available here.

(2) Assembly Tree
The assembly structure of the 3D model is displayed here.

(3) Right Click Menus
Most operations are available from right click menus.

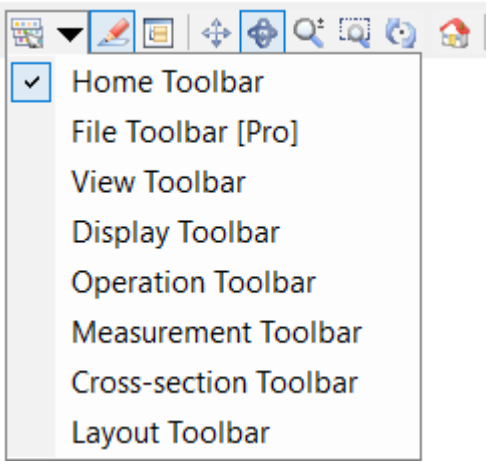
(4) Graphic Window
Main place to operate on the 3D model.



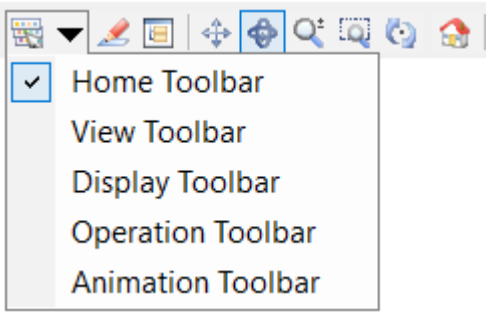
XVL Player Toolbars

XVL Player contains 9 different toolbars.

Edit Mode



View Mode



(1) Home Toolbar

(2) File Toolbar

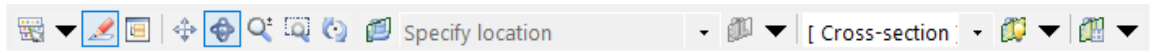
(3) View Toolbar

(4) Display Toolbar

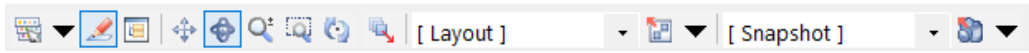
(5) Operation Toolbar

(6) Measurement Toolbar

(7) Cross-section Toolbar



(8) Layout Toolbar



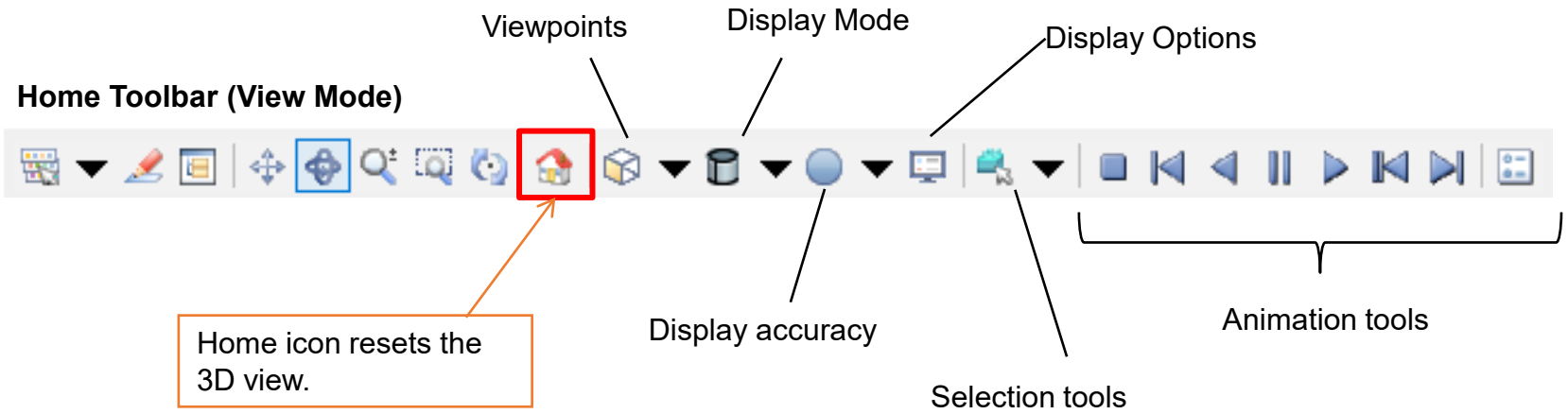
(9) Animation Toolbar

Table of Contents

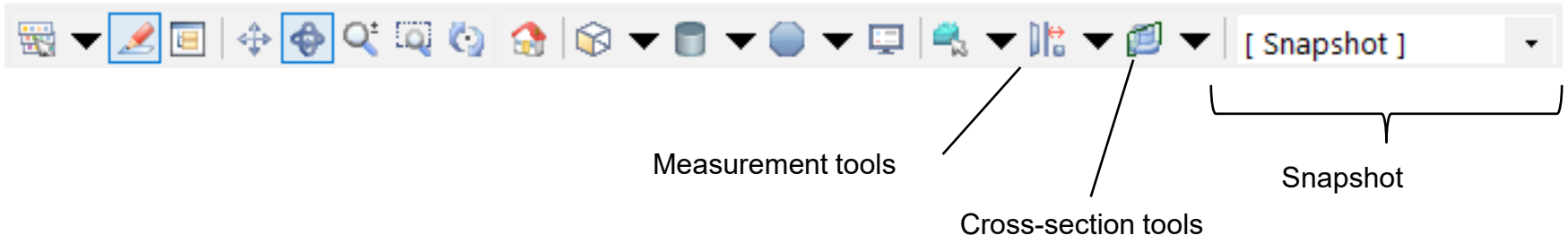
Home Toolbar

- The Home toolbar contains frequently-used tools. The Home toolbar contains different tools for **View mode** and **Edit mode**.
- More tools are available on other toolbars.

Home Toolbar (View Mode)



Home Toolbar (Edit Mode)



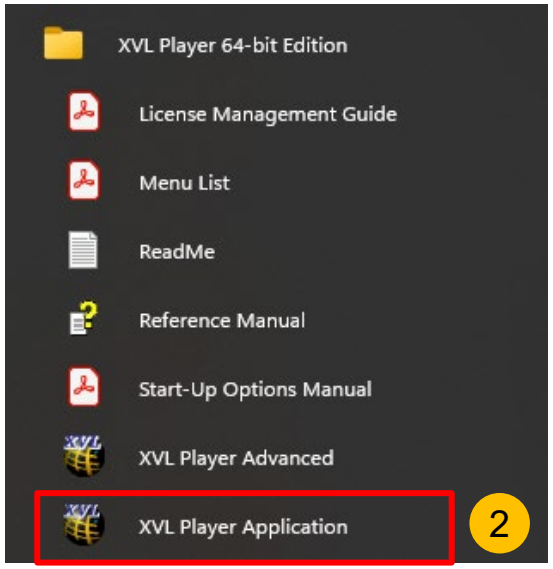
Opening an XVL File in XVL Player Application

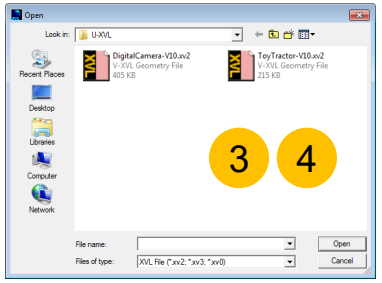
To start up XVL Player:

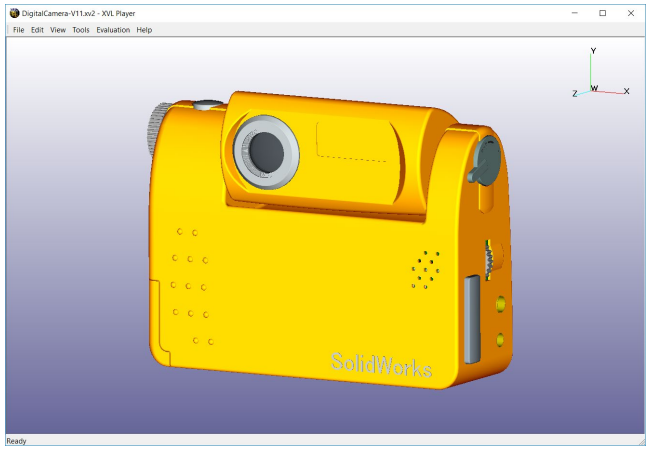
1. Select **XVL Player Application** from the All Apps menu.

To open an XVL file:

2. Select **File > Open** to open the **Open** dialog.
3. Select an XVL file to open.







XVL Player Application

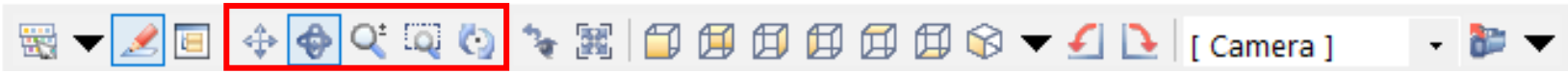
Table of Contents

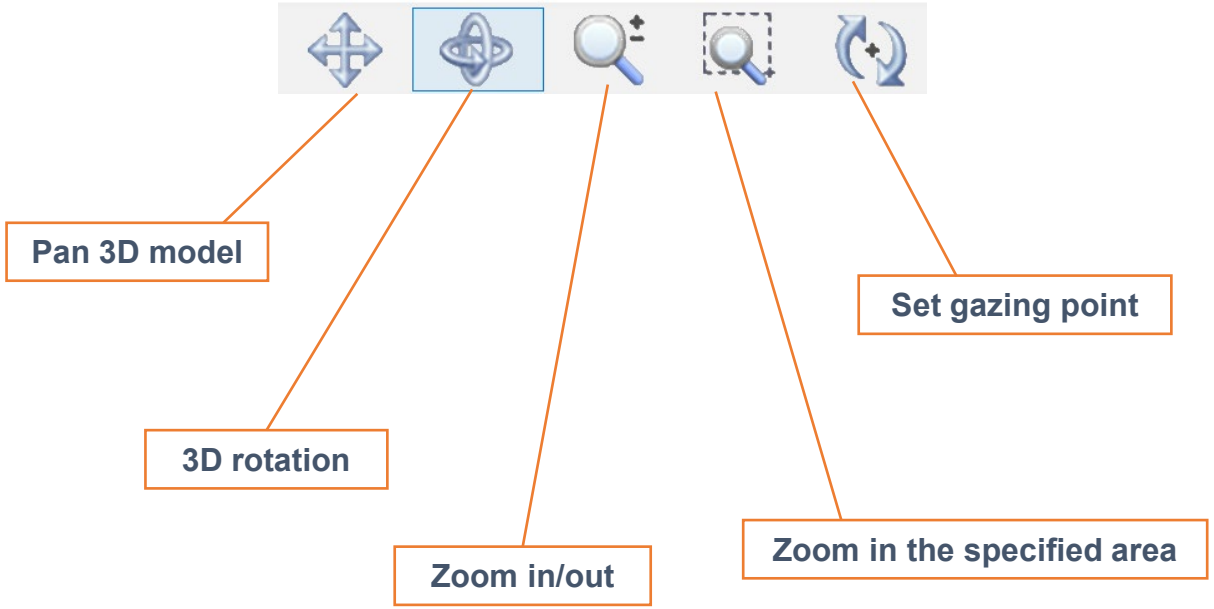
Viewing

Table of Contents

Viewing Operations 1/4

View Toolbar





Viewing Operations 2/4

View Toolbar

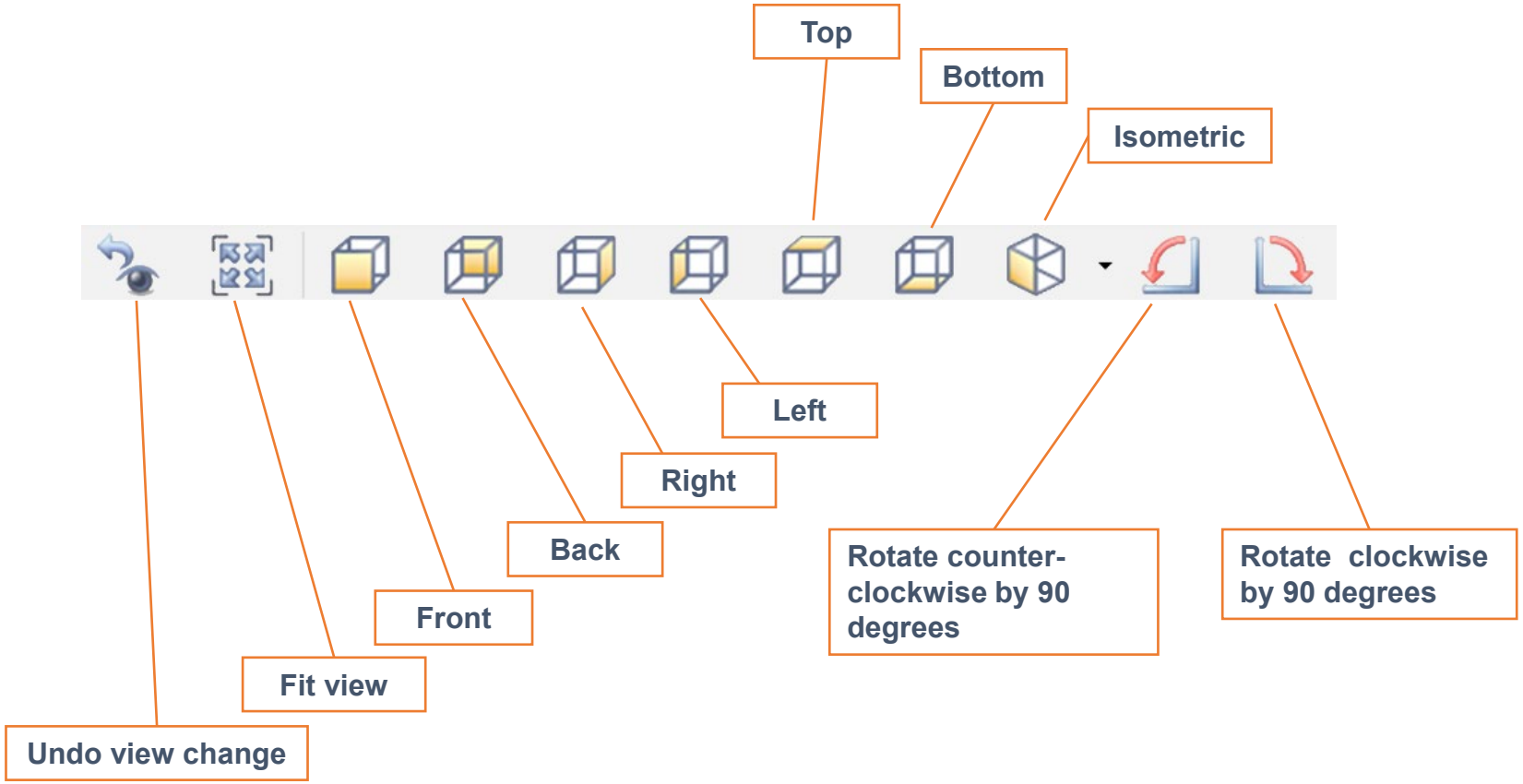
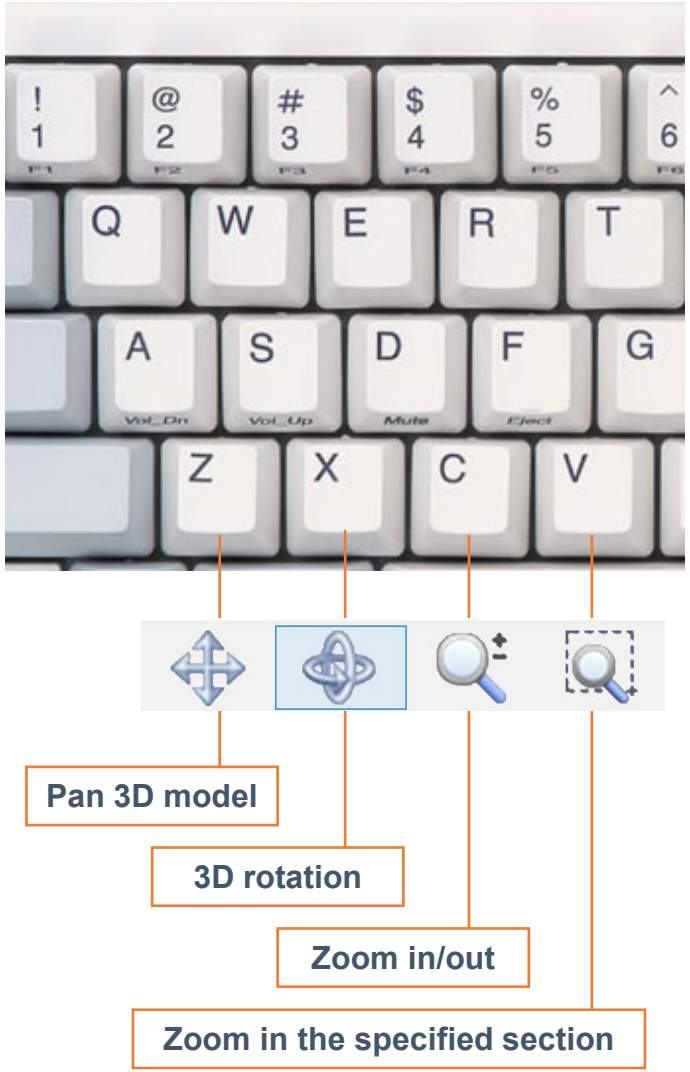


Table of Contents

Viewing Operations 3/4

Keyboard short cuts:

- Mouse + z: Pan 3D model
- Mouse + x: 3D rotation
- Mouse + Shift + x: 2D rotation
- Mouse + c: Zoom in/out
- Mouse + v: Zoom in the specified section



Viewing Operations 4/4

Default Mouse Operations for Viewing (= CATIA V5 mode)

Pan

– Hold the middle mouse button/wheel #2 and drag your mouse.

Rotation (3D)

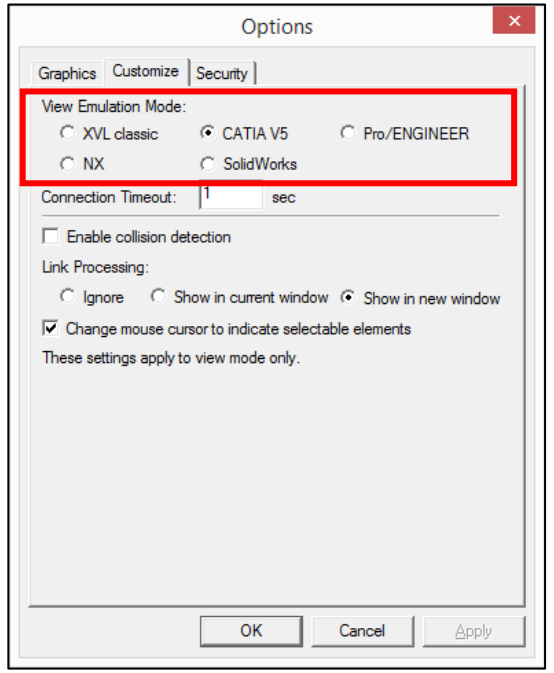
– Hold the middle mouse button/wheel #2 and either left mouse button #1 or right mouse button #3 and drag your mouse.

Rotation (2D)

– Operation of "Rotation (3D)" + SHIFT key

Zoom

– Hold the middle mouse button/wheel #2 and click on either left mouse button #1 or right mouse button #3 and drag your mouse



You can change the view emulation mode by right-clicking and selecting **Tools > Options > Customize**.

In order to adjust the center of rotation, click the middle mouse button/wheel #2. This will to make the cursor location center of rotation.

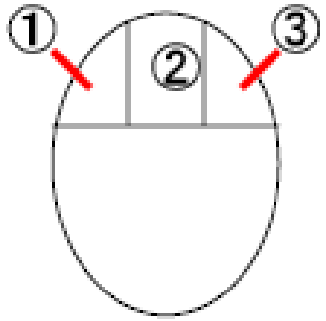
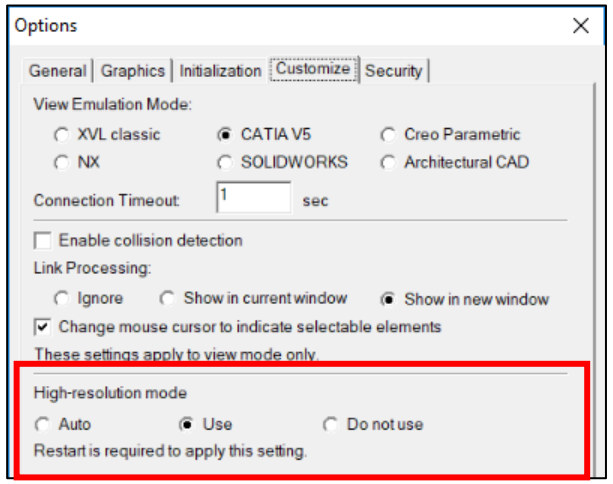


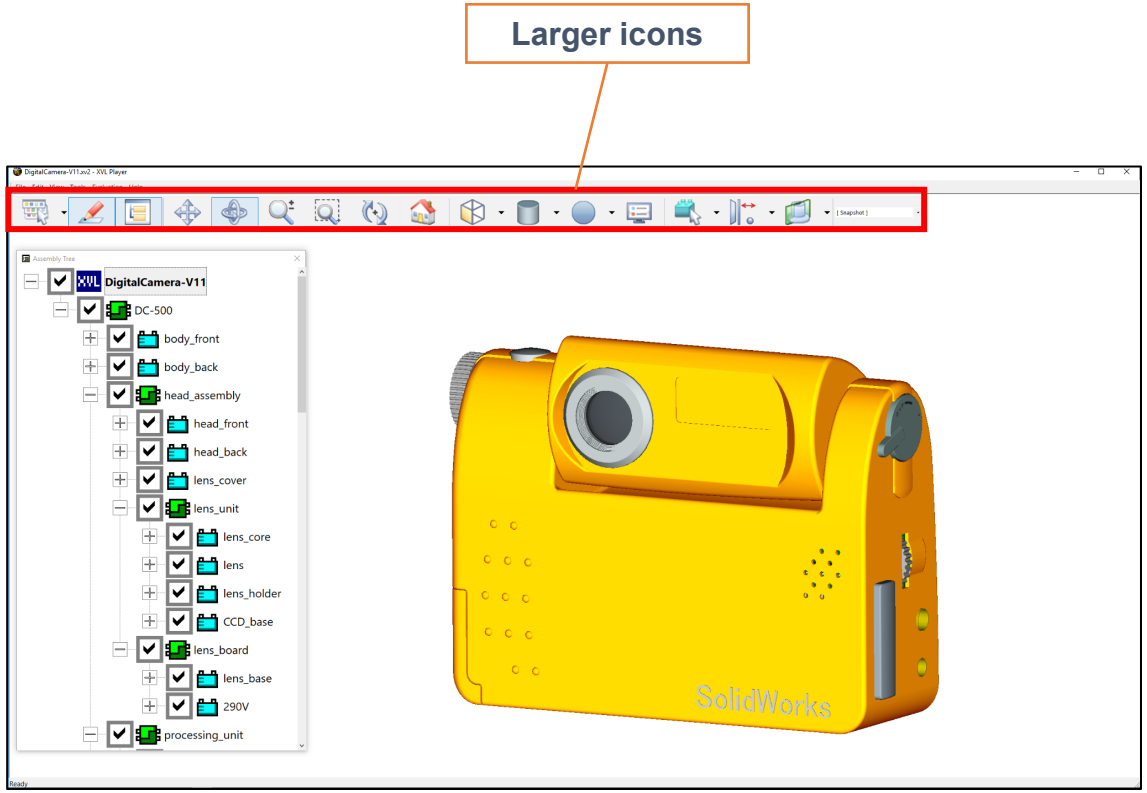
Table of Contents

High-Resolution Display Mode

Toolbars and assembly trees can be displayed with larger icons. This mode is effective when using the XVL Player on a high-resolution monitor or tablet.

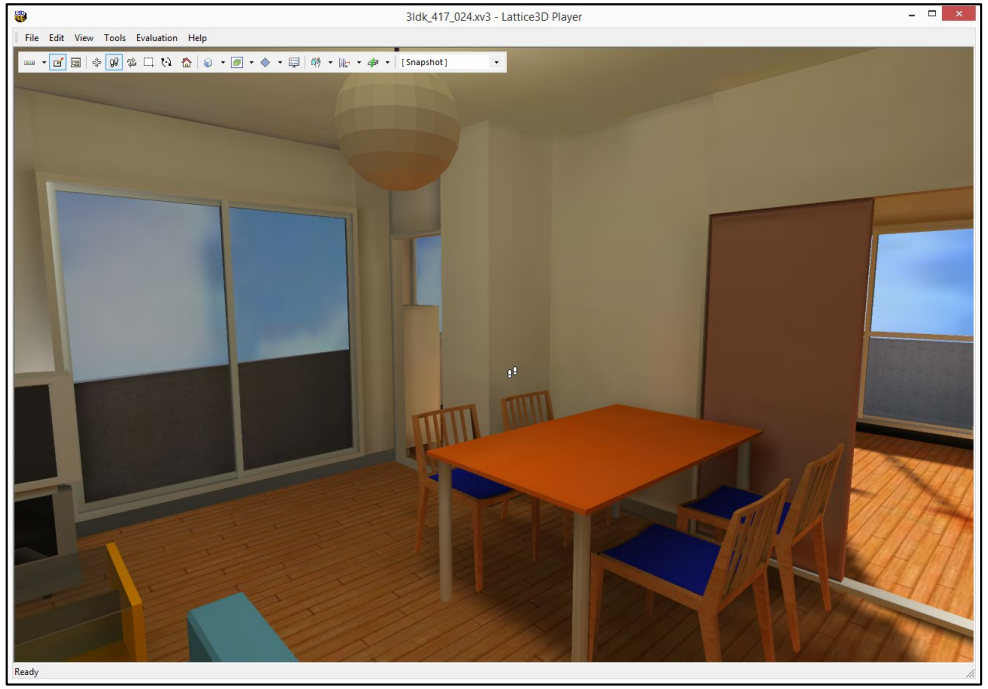
1. Select **Tools > Options** to open the Options dialog.
2. In the **Customize** tab, select Use for High-resolution mode.



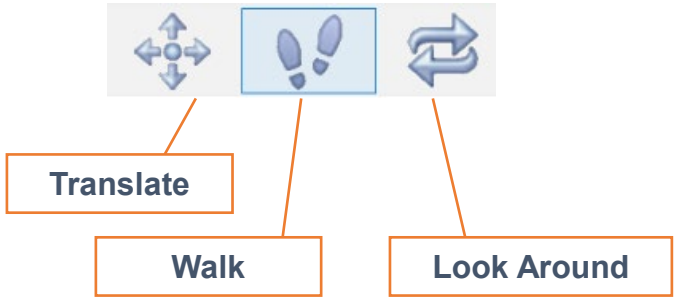


Walk Through

Right Click Menu > View Operation Mode > Walk will let you walk through the scene.



- Toolbar icons change to Walk Through controls.

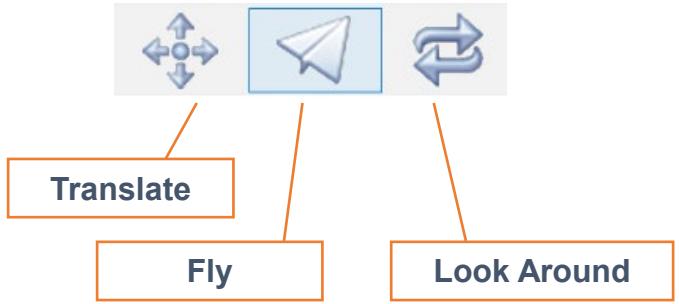


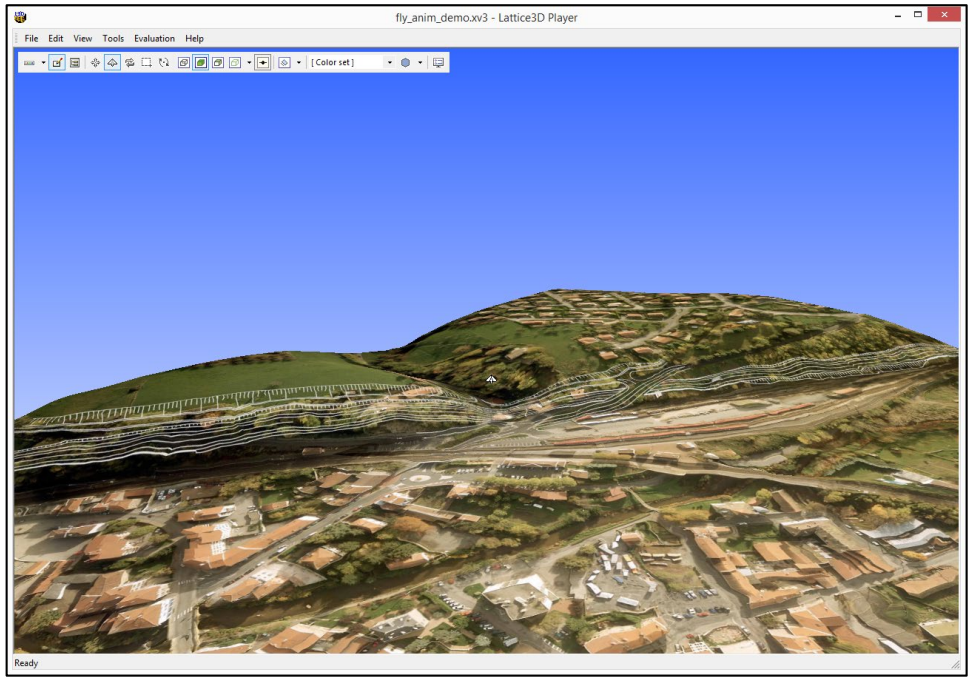
- By selecting **View Operation Mode > Examine**, you can go back to view mode.

Fly Through

Right Click Menu > View Operation Mode > Fly will let you fly through the scene.

- Toolbar icons to the Fly Through controls.





- By selecting View **Operation Mode > Examine**, you can go back to view mode.

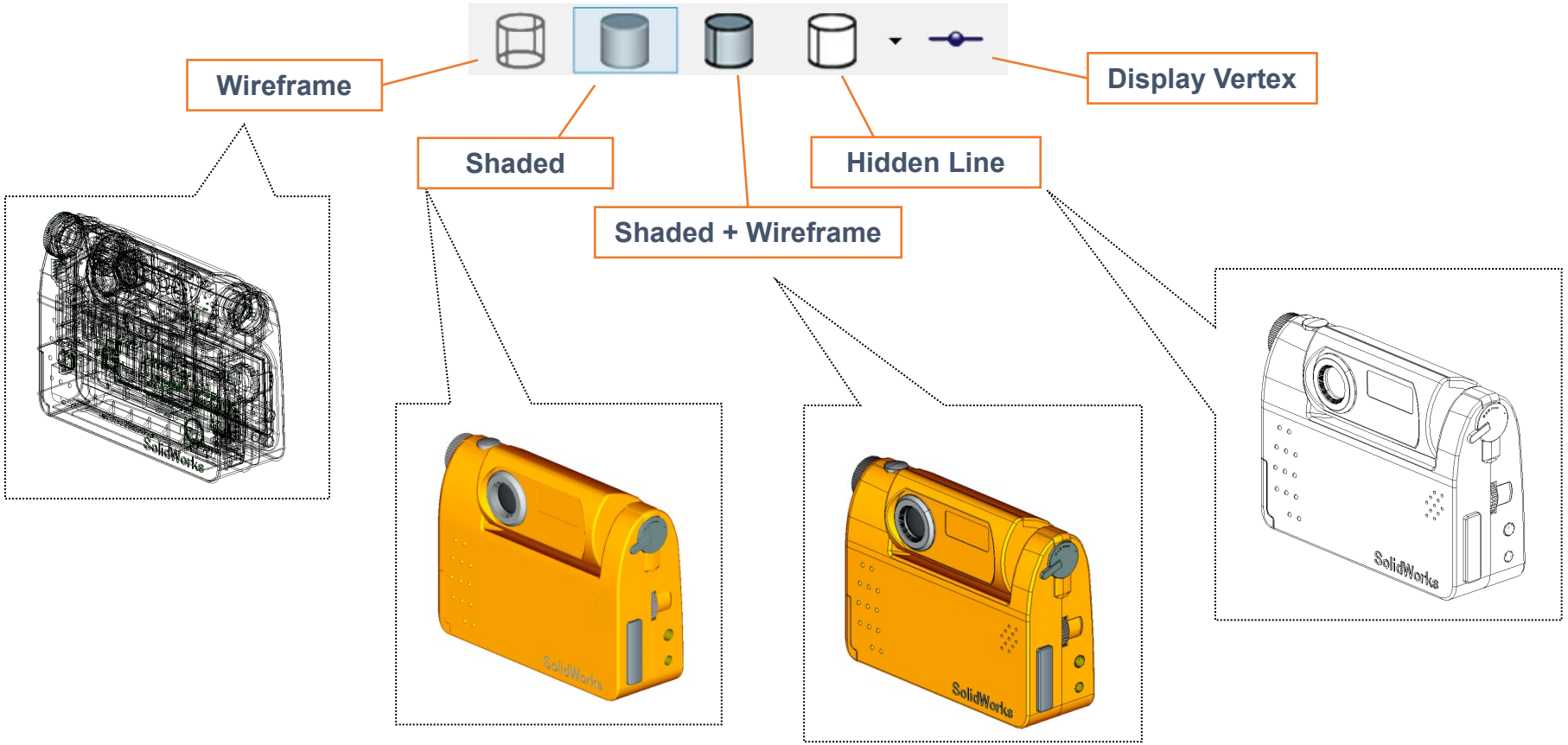
*** Whereas the Walk through mode maintains the vertical level, the Fly Through mode can change the height of the view (fly up and down).**

Display

Table of Contents

Display Modes

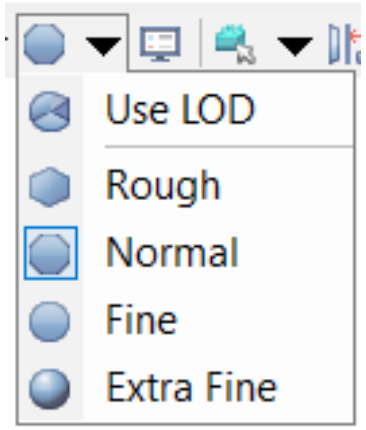
Display Toolbar



Changing Tessellation

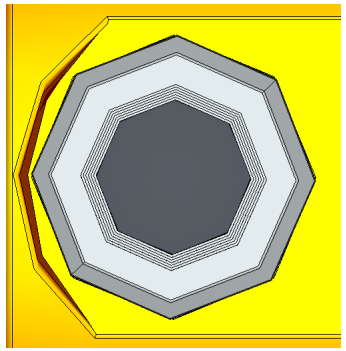
You can adjust tessellation quality according to your environment.

Display Toolbar

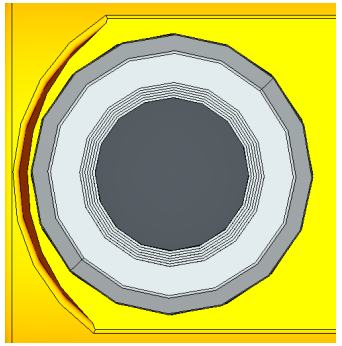


The LOD icon adjusts level of details according to the view.

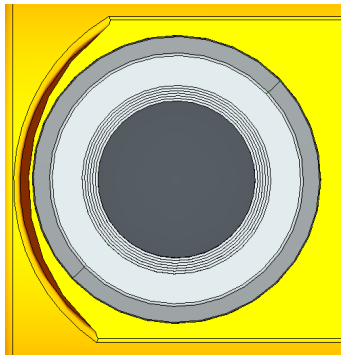
By zooming in or out, you can see that Player re-tessellates the view.



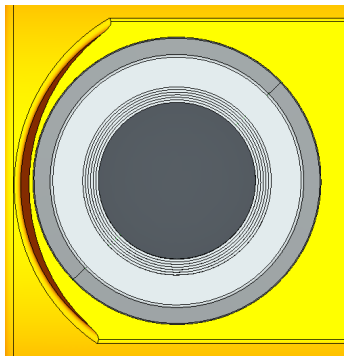
Rough



Normal



Fine



Extra Fine

Display Settings

General tab:

– Coordinate system

– Projection

– Material priority

Display Speed/Quality tab:

- Performance settings.

Display Color tab:

- Background settings
- Color settings
- Font settings
- Arrow settings

Switch Display tab:

- Display settings

Hidden Line Display:

- Hidden line display settings
- Illustration display settings

Display Toolbar

Clicking the **Display Options** icon will bring up the **Display Options** dialog box:

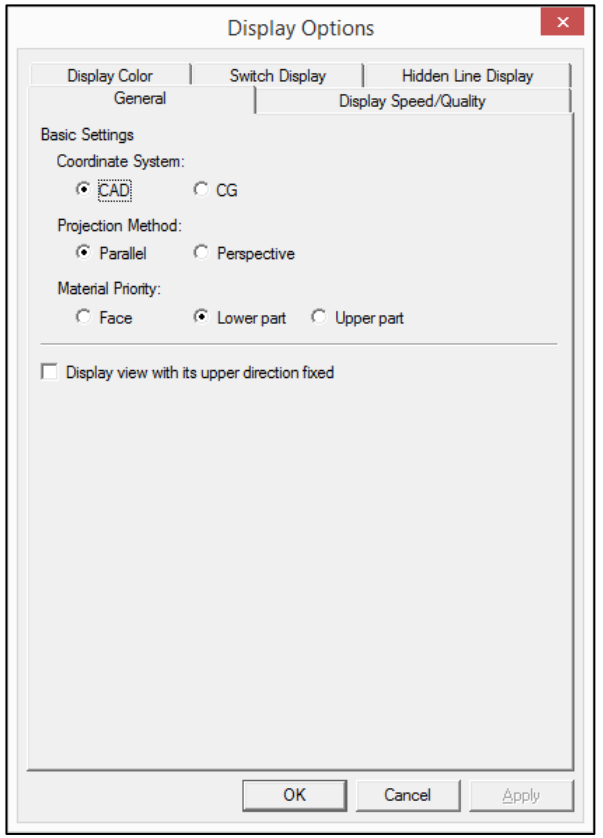
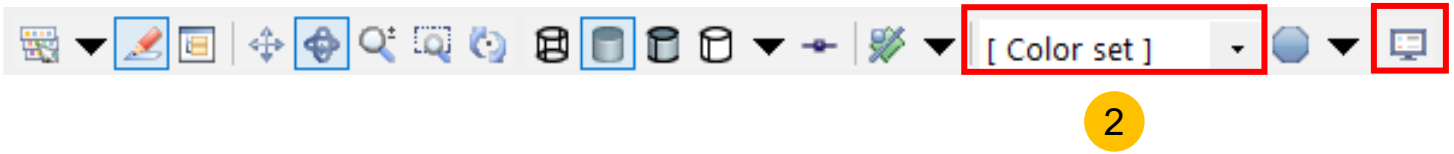


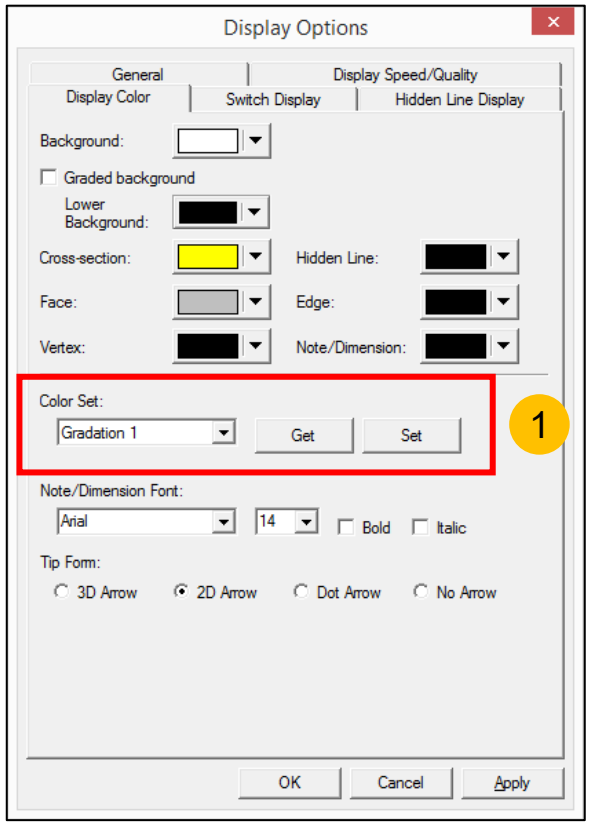
Table of Contents

Using Color Sets

1. After choosing display colors, you can register the color set by selecting an entry from the Color set dropdown menu and clicking the Set button.
2. To reflect the registered color set to the graphic window, select a color set from the Color Set list.

Display Toolbar





*** XVL Player will remember the color set.**

Selecting Objects

Table of Contents

Target Selection

In the toolbar, specify the type of selection to pick the target to work on.

Operation Toolbar

Part selection

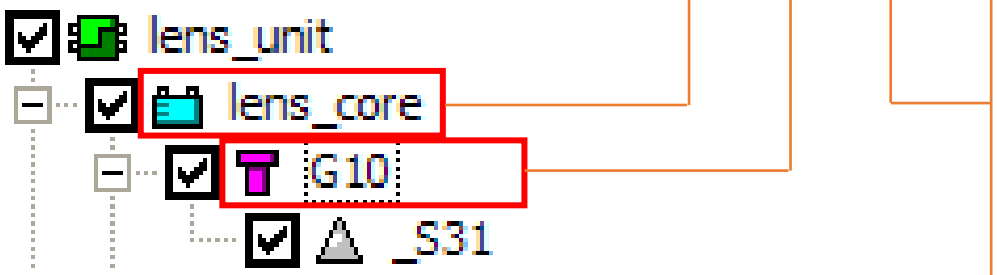
- Select parts

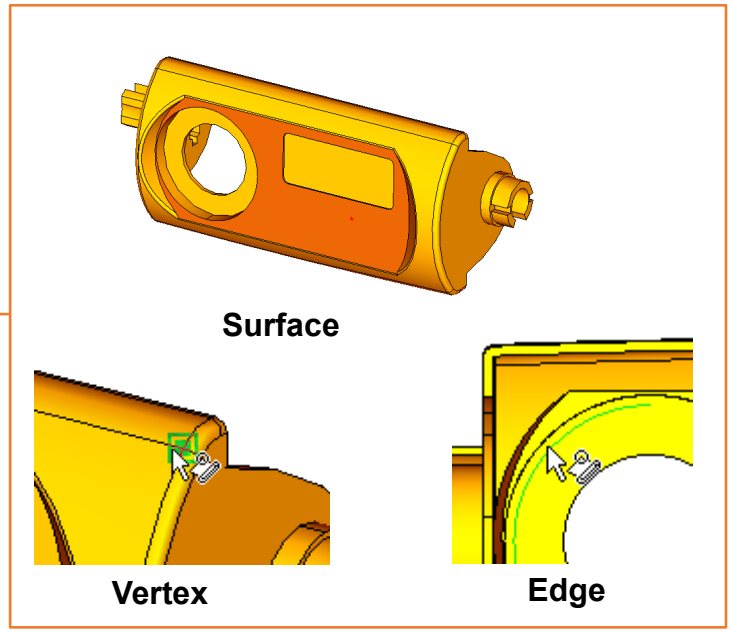
Body selection

- Select bodies

Element selection

- Select surfaces, vertices, edges

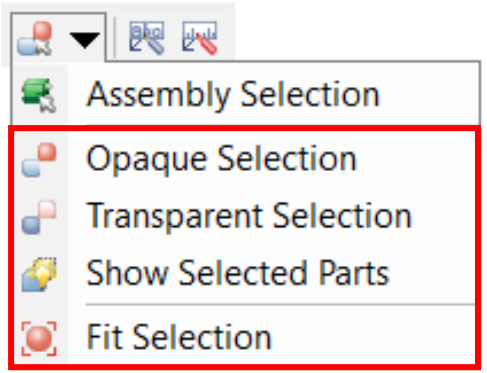


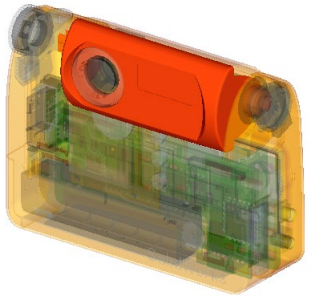


Transparent and Fit Selection

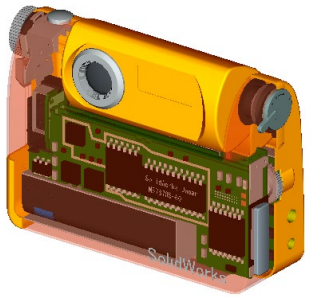
1. Turning on **Opaque Selection** will make the selected part solid and the other parts transparent.
2. Turning on **Transparent Selection** will make the selected part transparent and the other parts solid.
3. Turning on **Show Selection Parts** will display the selected parts only in the graphic window.
4. Turning on **Fit Selection** will fit the selected part in the graphic window.

Operation Toolbar

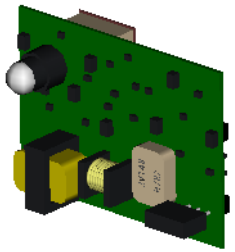




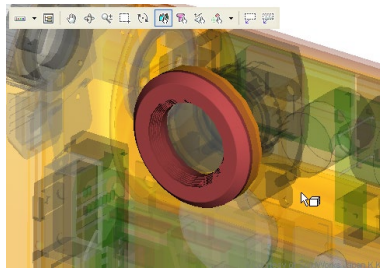
Opaque Selection



Transparent Selection



Show Selected Parts



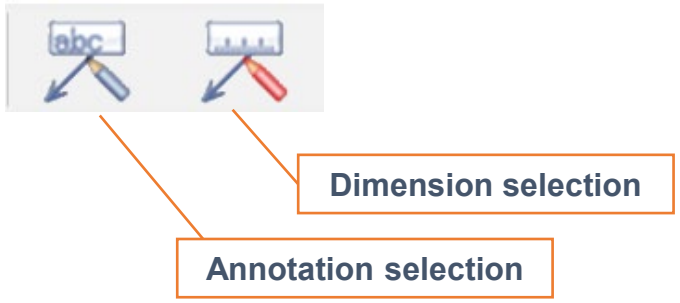
Opaque Selection + Fit Selection

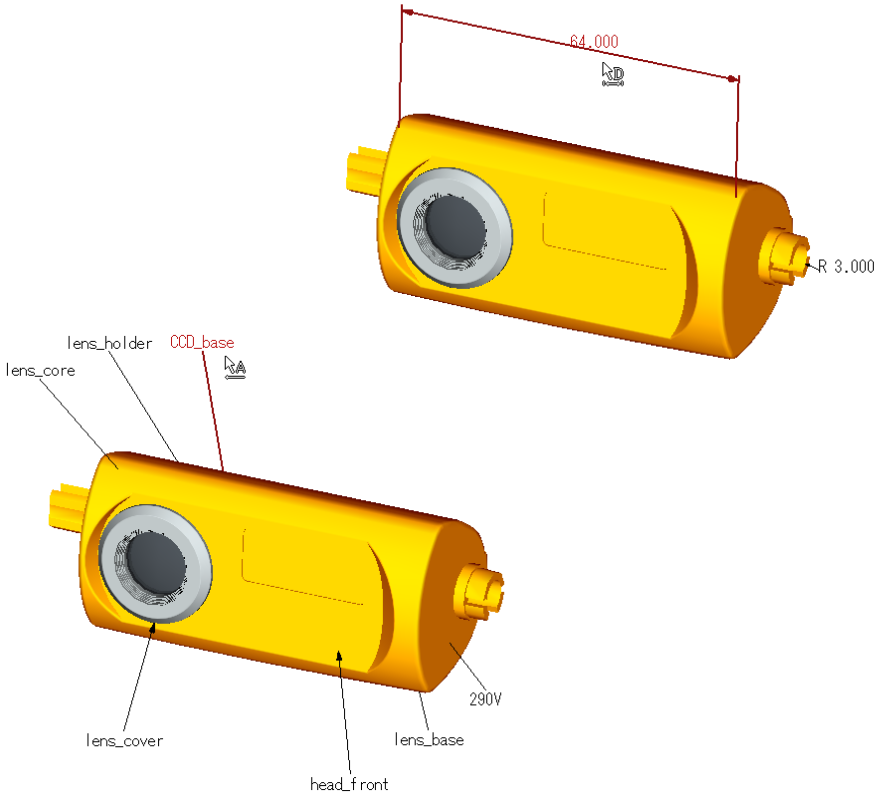
Table of Contents

Annotation / Dimension Selection

In the toolbar, click the **Edit Note** / **Edit Dimension** icon to pick annotations or dimensions.

Operation Toolbar

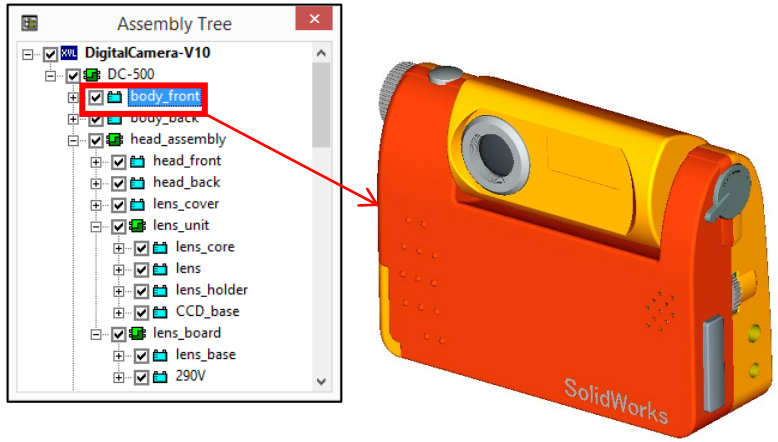




* **Annotations and dimensions can not be moved after selection.**
* **Editing annotations and dimensions requires an XVL Studio license.**

Part Display Controls

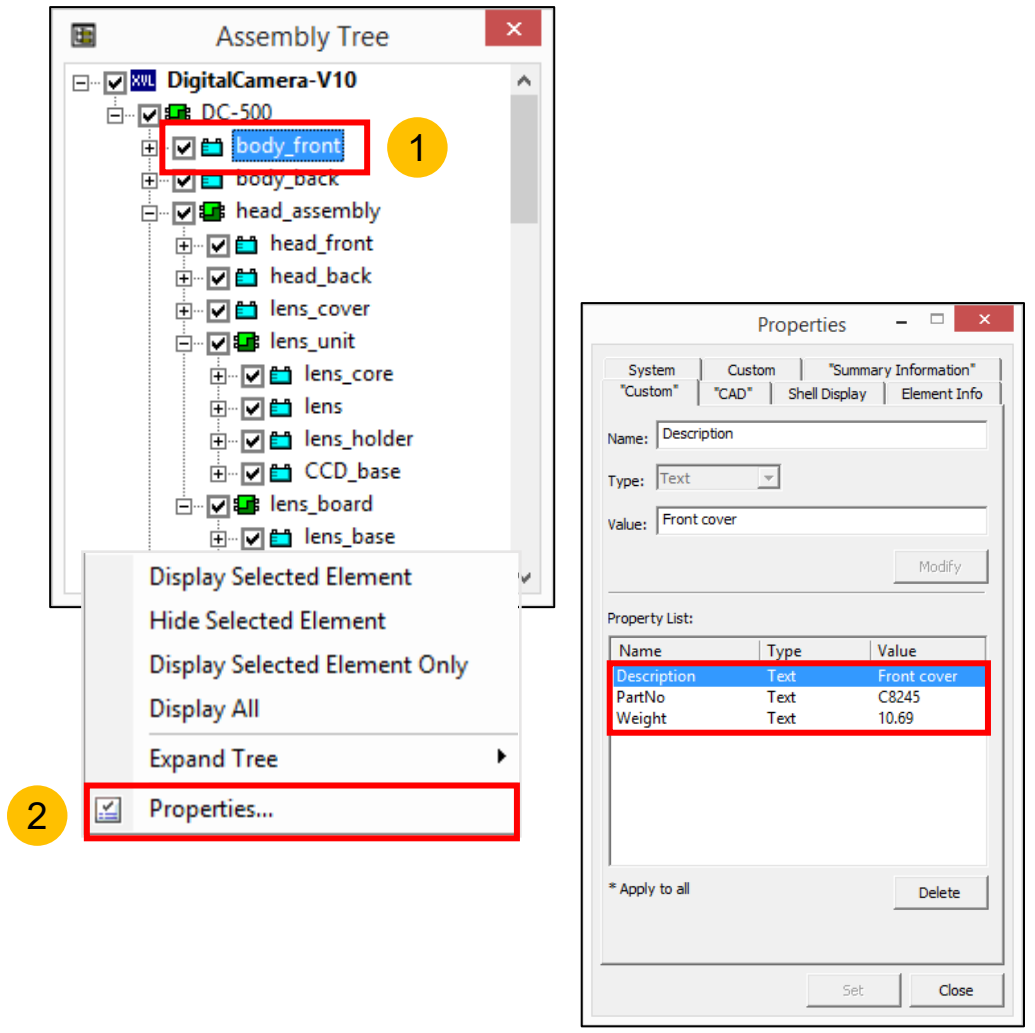
1. Select the **Assembly Tree** icon from the **Operation Toolbar** to show the **Assembly Tree**.
2. Clicking each node of the tree structure highlights the corresponding element(s).
3. Use + and – to control display of the tree structure.
4. You can select multiple nodes by holding the Ctrl and Shift keys.
5. Switch on and off the check boxes to display or hide each part.
6. Right click on the **Assembly Tree** to bring up the right-click menu.
   a) Shows the selected element.
   b) Hides the selected element.
   c) Shows the selected element and hides all other elements.
   d) Shows all elements.



Operation Toolbar

Displaying Group Properties

1. Select a part on the **Assembly Tree**.
2. To show the **Properties** dialog, select **Properties…** from the right click menu.
   - XVL data contains properties inherited from the original CAD system.



*** Editing the properties requires an XVL Studio license.**

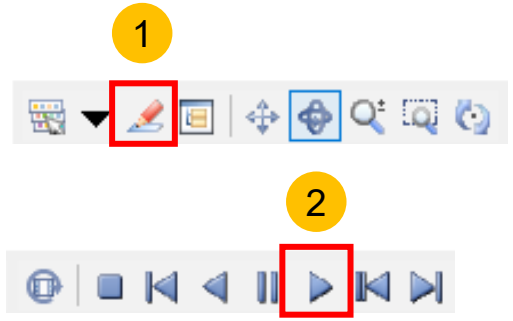
Animation

Table of Contents

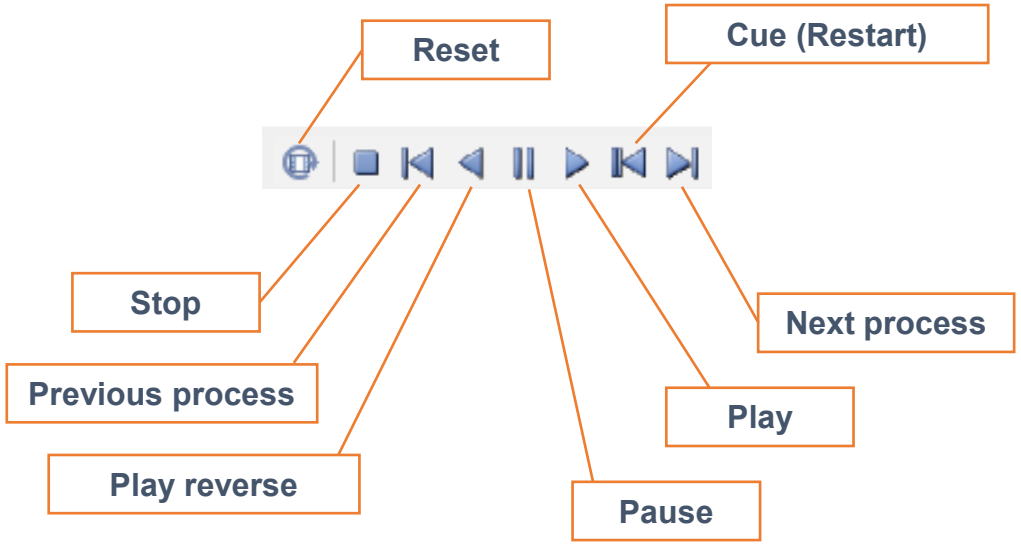
Playing Animation

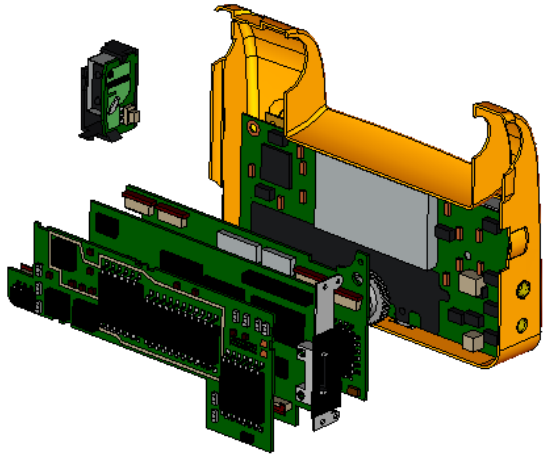
1. Switch to **View Mode**.
2. Click on the **Play** icon to play the animation.

Animation Toolbar



Ex) Process Animation Icons





Setting Animation Options

Clicking the **Animation Options** icon will bring up the **Animation Options** dialog box:

Animation Toolbar

Play Range:

– Select if you play animation of whole process or selected process.

Play Interval:

– Select if you play animation of whole range or step by step.

Step Interval:

– Select if you jump to next process or next task when you click **Next/Previous Process** icon.

Loop:

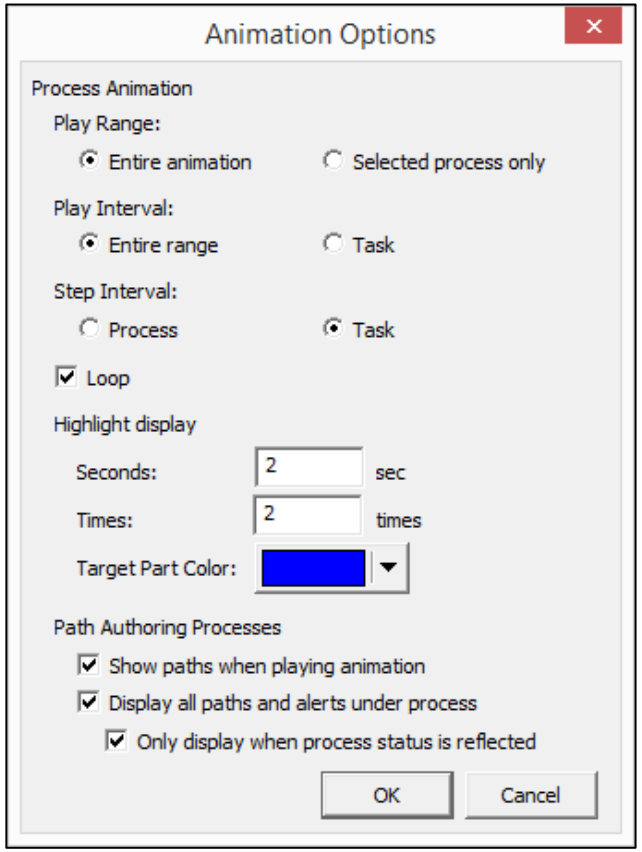
– Check this when you loop process animation.

Highlight display:

– Specify the settings to highlight parts in process animation.

Path Authoring Processes

– Specify how to display animation trace lines and text alerts.



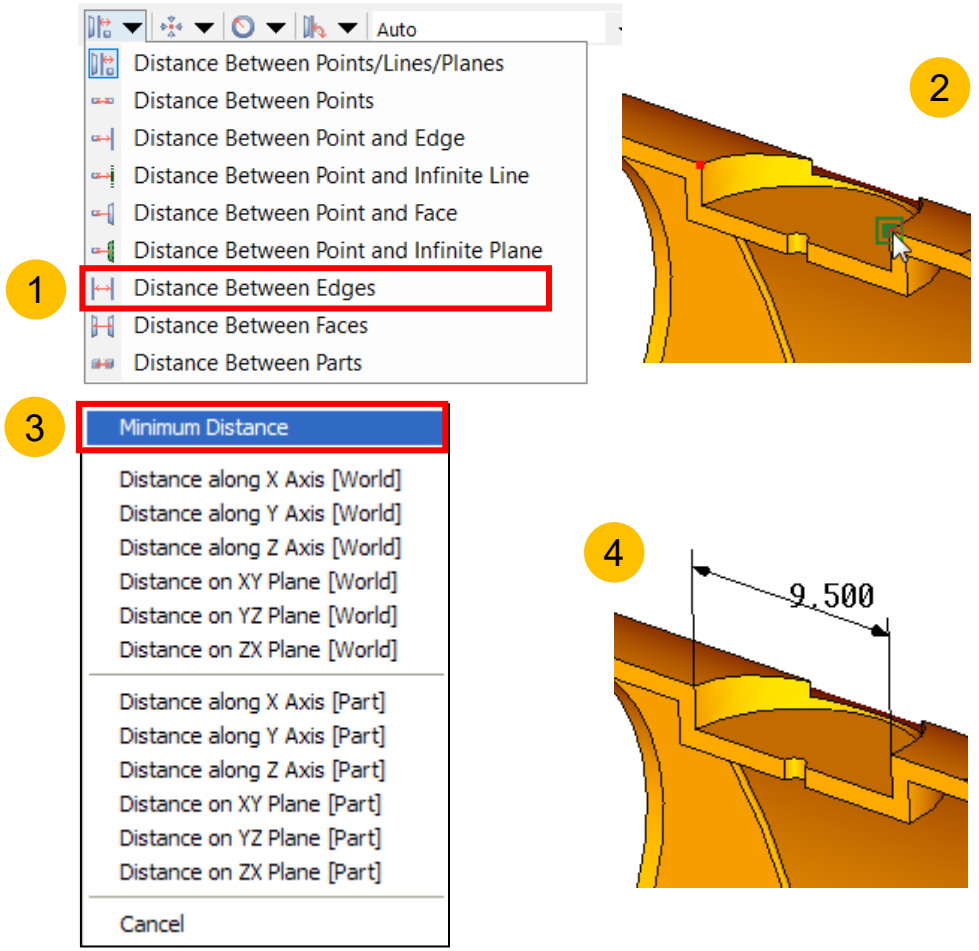
Measurement

Table of Contents

Simple Measurement

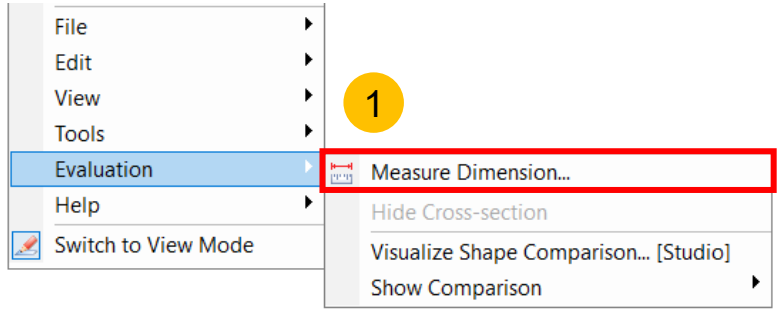
1. Select the type of measurement from the toolbar.
2. Select target(s).
   – As you move your mouse cursor, the corresponding points, edges, or faces are highlighted.
3. Choose the measurement method.
4. Adjust the position of the dimension.

Measurement Toolbar

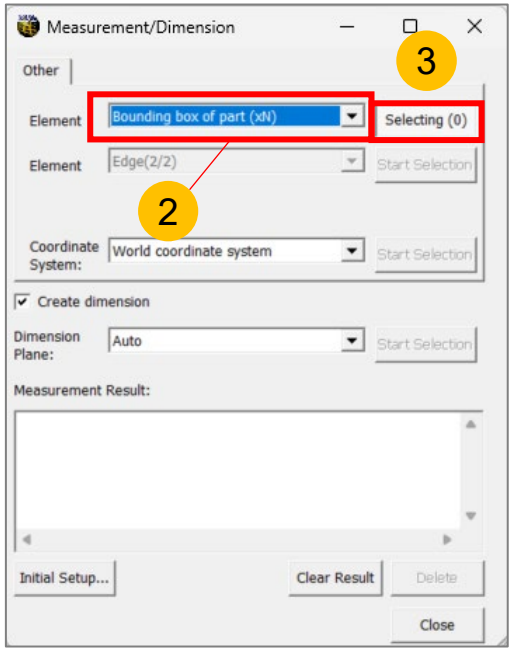


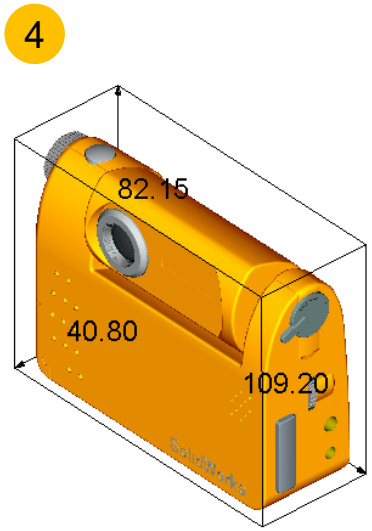
Bounding Box

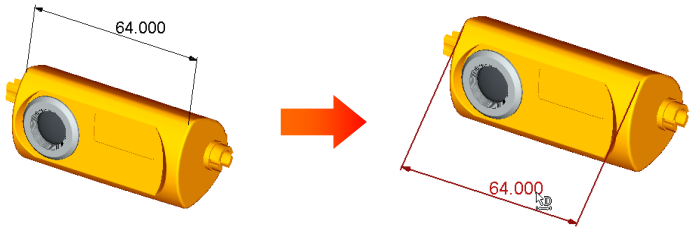
1. Right-click and select **Evaluation > Measure Dimension…** to display the **Measurement/Dimension** dialog.
2. On the **Other** tab, specify **Bounding box of part (xN)**.
3. Select an element from the graphic window.
4. Click on the **Selecting** button.
5. XVL Player will create a bounding box with dimensions.



*** Additional measurements are available with an XVL Studio license.**
*** NOTE: When the Measurement/Dimension dialog box is open, it is possible to move dimensions.**







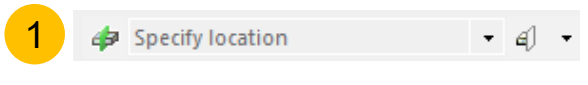
Cross-sectioning

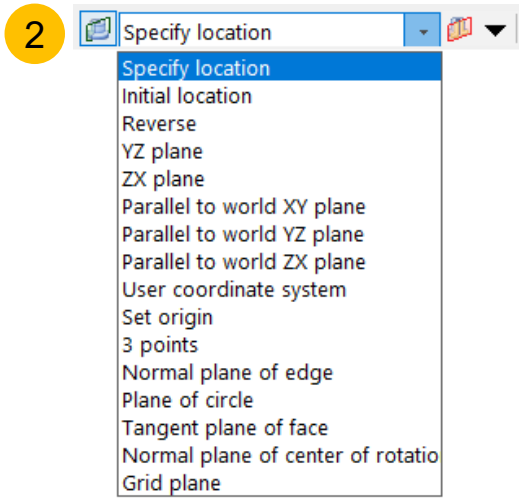
Table of Contents

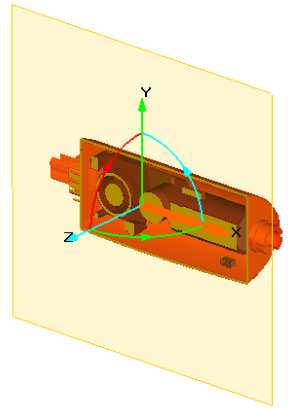
Creating Cross-sections

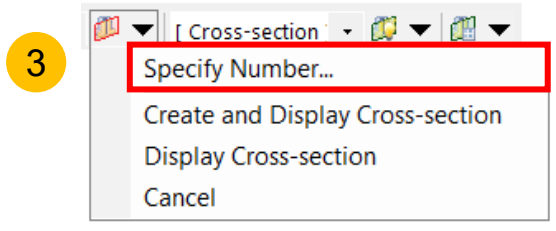
Cross-section Toolbar

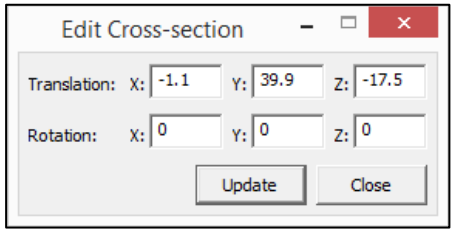
1. Select the Create/Edit Cross-section icon from the toolbar.
2. Specify the location of the cutting plane from the Location list or by using the manipulator.
3. To specify the location of cutting plane numerically, select Edit Cross-section > Specify Number… and enter the values.
4. Select Edit Cross-section > Create and Display Cross-section to create the profile.











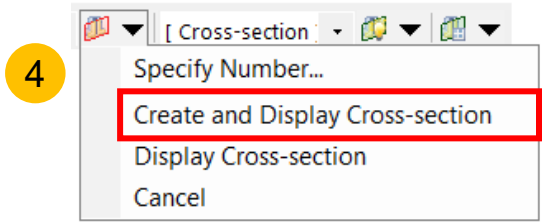
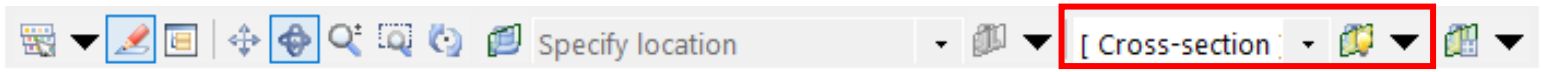


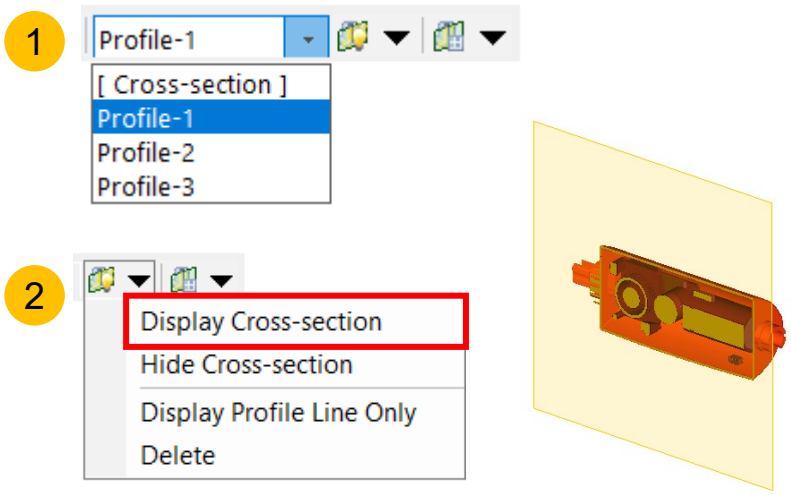
Table of Contents

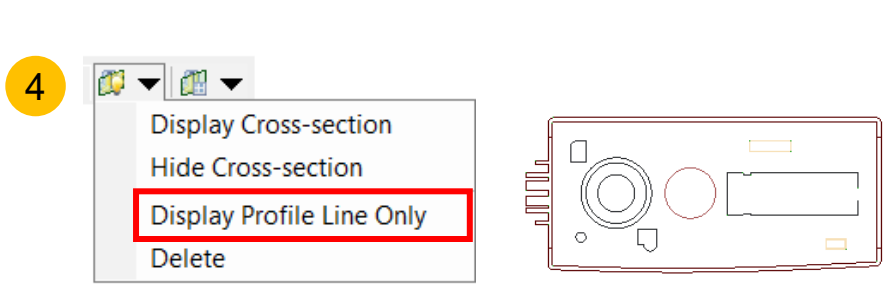
Displaying Cross-sections

Cross-section Toolbar



1. Select a profile from the **Cross-section List**.
2. To display the cross section, select **Display Cross-section**.
3. To go back to normal view, select **Hide Cross-section**.
4. To display profile lines, select **Display Profile Line Only**.

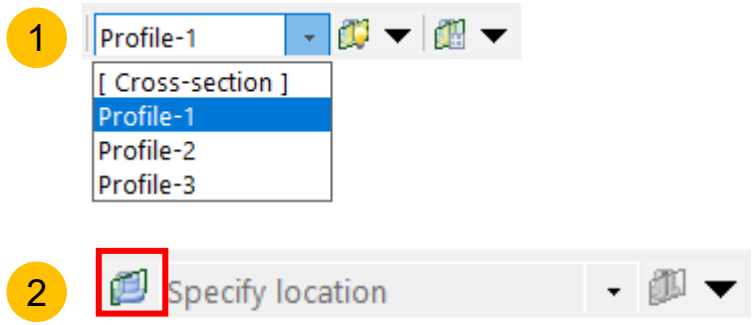


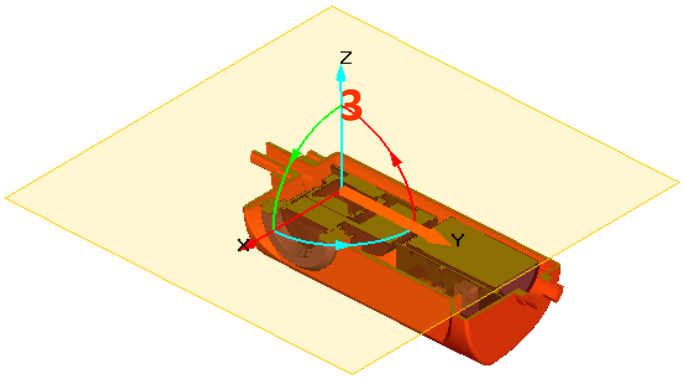


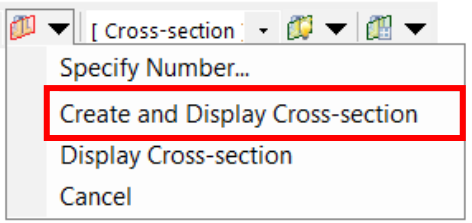
Editing Cross-sections

Cross-section Toolbar

1. Select a cross-section from the **Cross-section List**.
2. Select the **Create/Edit Cross-section** icon from the toolbar to start editing.
3. Change the location of cutting plane then select **Create and Display Cross-section**.





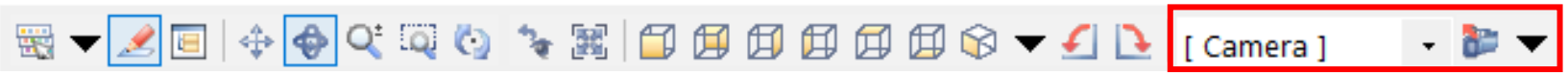


Cameras / Layouts / Snapshots

Table of Contents

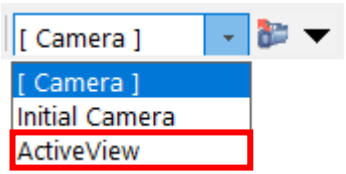
Applying Cameras

View Toolbar

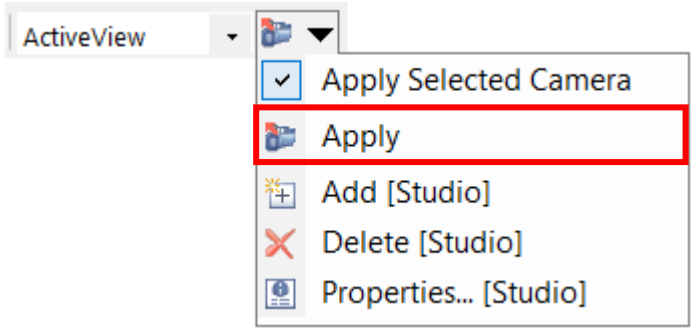


1. Select a camera from the **Camera List**.
2. Select **Apply** from the menu to apply the selected camera.

1



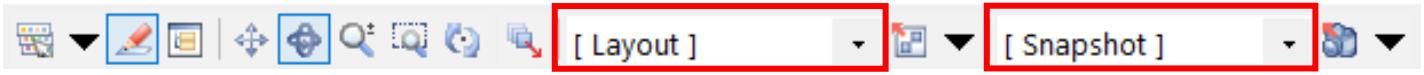
2

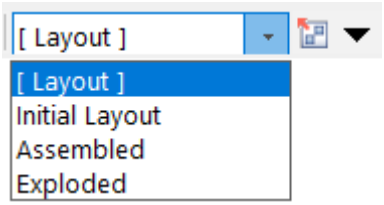


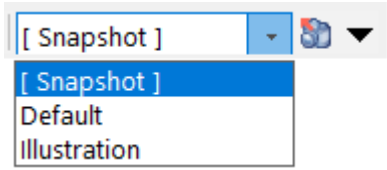
Applying Layouts / Snapshots

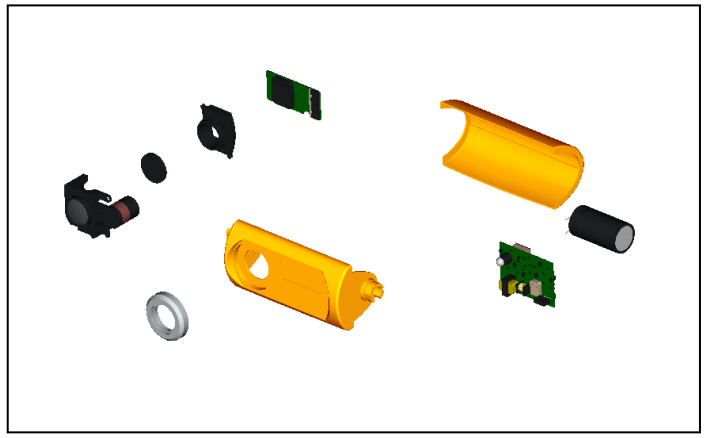
Selecting a **Layout** or **Snapshot** from the list will apply the selected layout or snapshot to the view.

Layout Toolbar









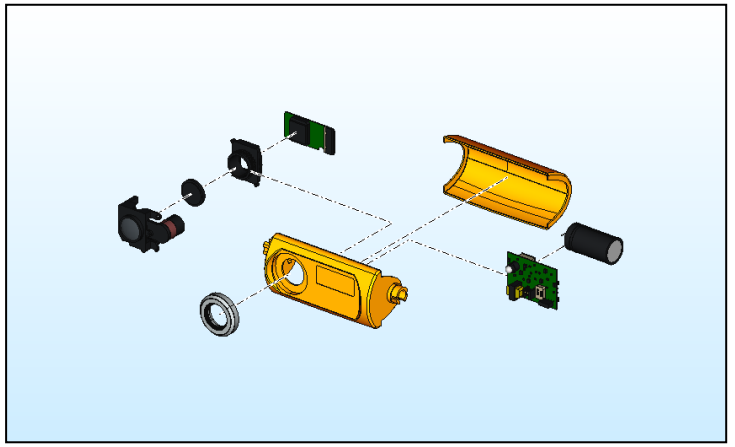


Table of Contents

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