SIEMENS EDA

ODB++ Viewer User Guide

Stand-Alone Edition

Software Version ODB++ Viewer 2610

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ODB++ Viewer

You can use ODB++ Viewer to examine the step of a product model that is stored in an ODB++Design directory structure.

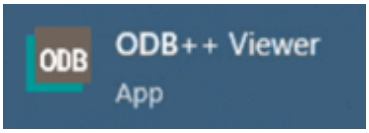
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Opening a Board or Panel in Direct Mode

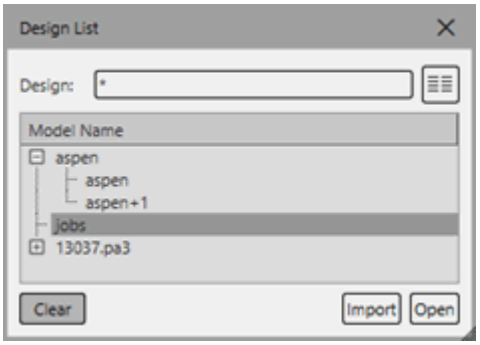
You can open a board or panel in a design that resides in an ODB++ directory structure, or in an ODB++ design that has been compressed to one of these file types: *tgz*, *gz*, *Z*, *tar*, or *zip*.

Procedure

1. Open the Design List dialog box.

If you want to...	Do the following:
Open ODB++ Viewer and open the board or panel	Open ODB++ Viewer in one of the following ways: • From the desktop icon:  • From the Windows **Start** menu: 
Open a different board or panel in ODB++ Viewer	In ODB++ Viewer, choose **File** > **Open Design**, and select the board or panel that you want to open.

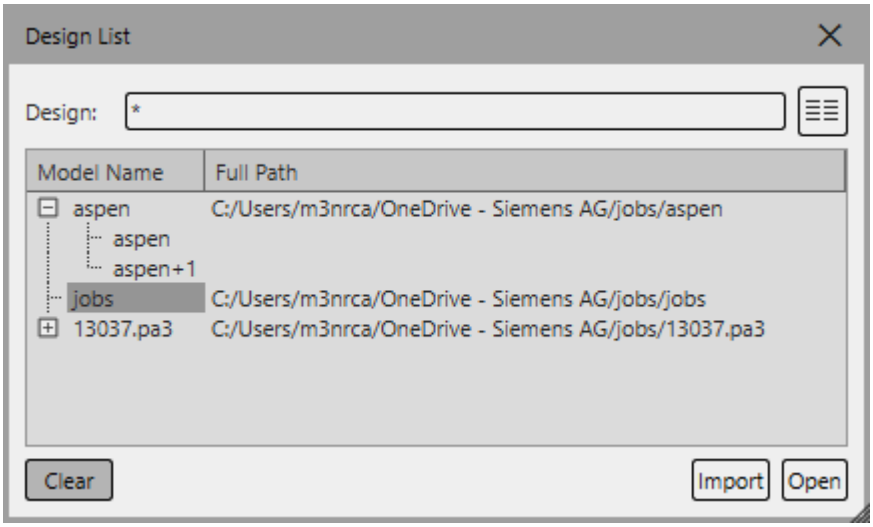
The Design List dialog box opens.



The list displays the locations of the ODB++ designs that have recently been imported into ODB++ Viewer.

You can expand a design node to list the boards and panels of the design.

By default, the Design List appears as a simple list of designs. Also available is the “details” mode, which lists the design names and full paths. You can use the toggle button to switch between the modes.



To restrict the Design List, type a string in the Design field.

To import a design into the Design List, click **Import**.

To remove a design location from the Design List, select it and click **Remove**.

2. In the Design List dialog box, double-click the design or board or panel you want to open, or select the board or panel and click **Open**.

Related Tasks

Filtering the Product Model List
Importing ODB++Design Data

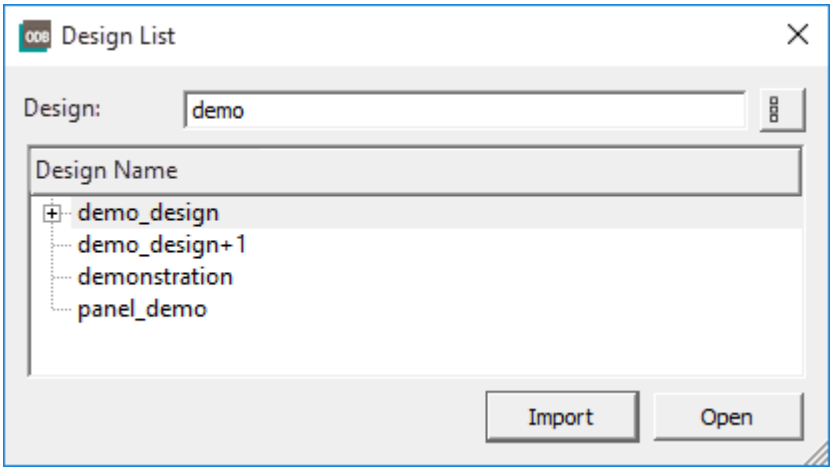
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Filtering the Design List

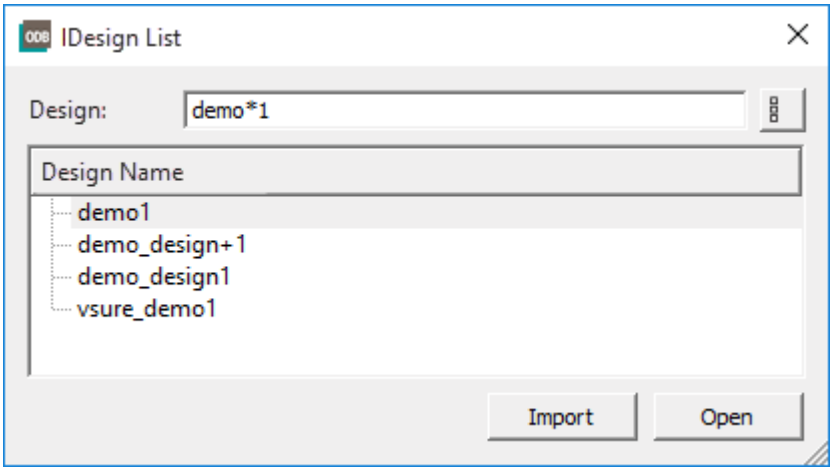
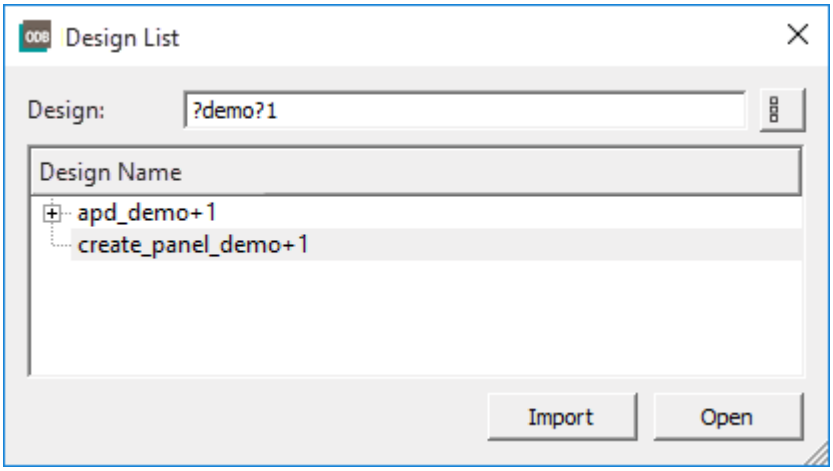
You can restrict the Design List to show only designs whose name contains a constant string, or intervening characters at specific locations.

Procedure

Use the appropriate filtering option:

If you want to...	Do this:
List designs containing a constant string	Type the constant string in the filter. For example, typing the string "demo" lists designs whose names include the string demo anywhere in the name. 
List designs whose names may contain intervening characters at specific locations	Type a string containing asterisks (*) to indicate where there may be intervening characters. For example, typing the string "demo*1" lists designs with names including the string "demo", and then any intervening characters or no intervening characters, and a one, anywhere in the name.

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If you want to...	Do this:
	
List designs whose names contain intervening characters at specific locations	Type a string containing question marks (?) to indicate where there must be intervening characters. For example, typing the string "?demo?1" lists designs with names including the string "demo", and then some intervening characters, and a one, where the string "demo" is not at the beginning of the design name. 

Importing ODB++Design Data

You can import an ODB++Design product model residing in an ODB++ directory structure or compressed to one of the following file types: *tgz*, *gz*, *Z*, *tar*, *zip*.

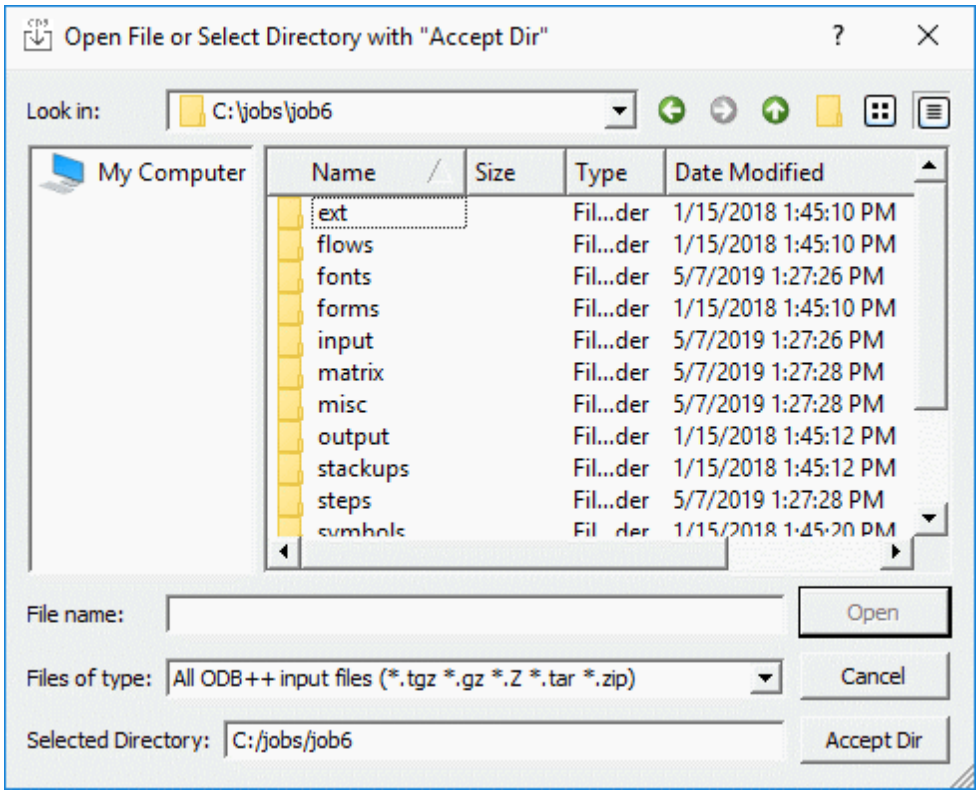
Procedure

1. In the Product Model List dialog box, click **Import**.

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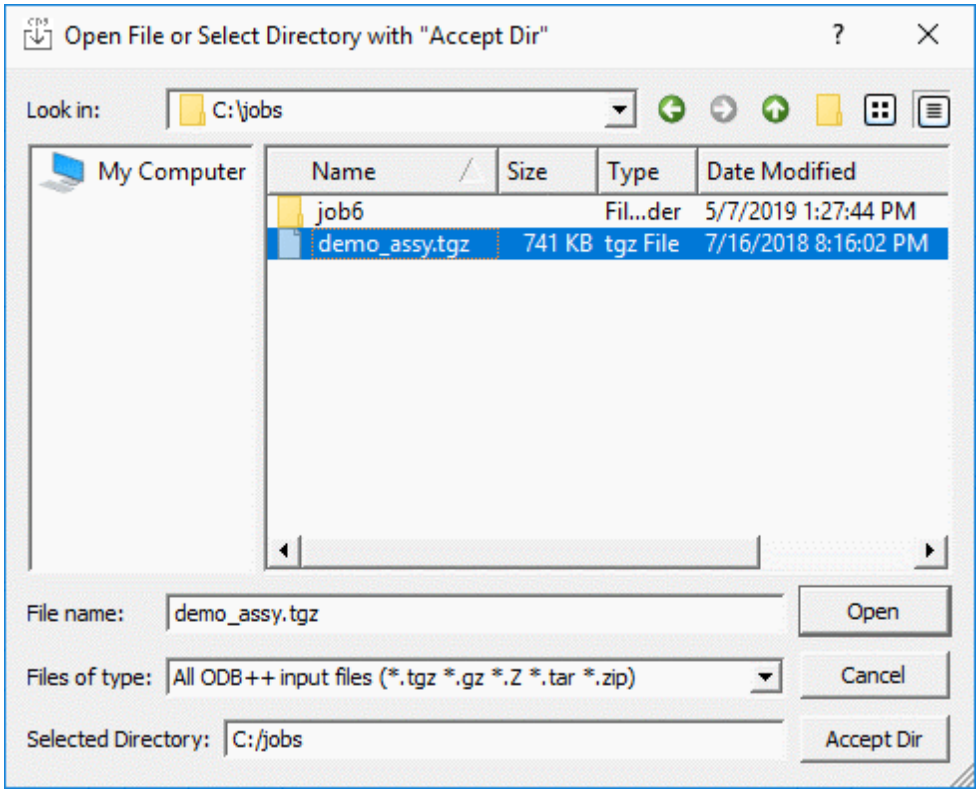
2. In the Open File or Select Directory with “Accept Dir” dialog box, use one of these options:

   - To import a product model that resides in an ODB++ directory structure, browse to the directory containing the ODB++ structure and click **Accept Dir**.



   - To import a product model that is compressed to a file, browse to the directory containing the file, select the file, and click **Open**.

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Results

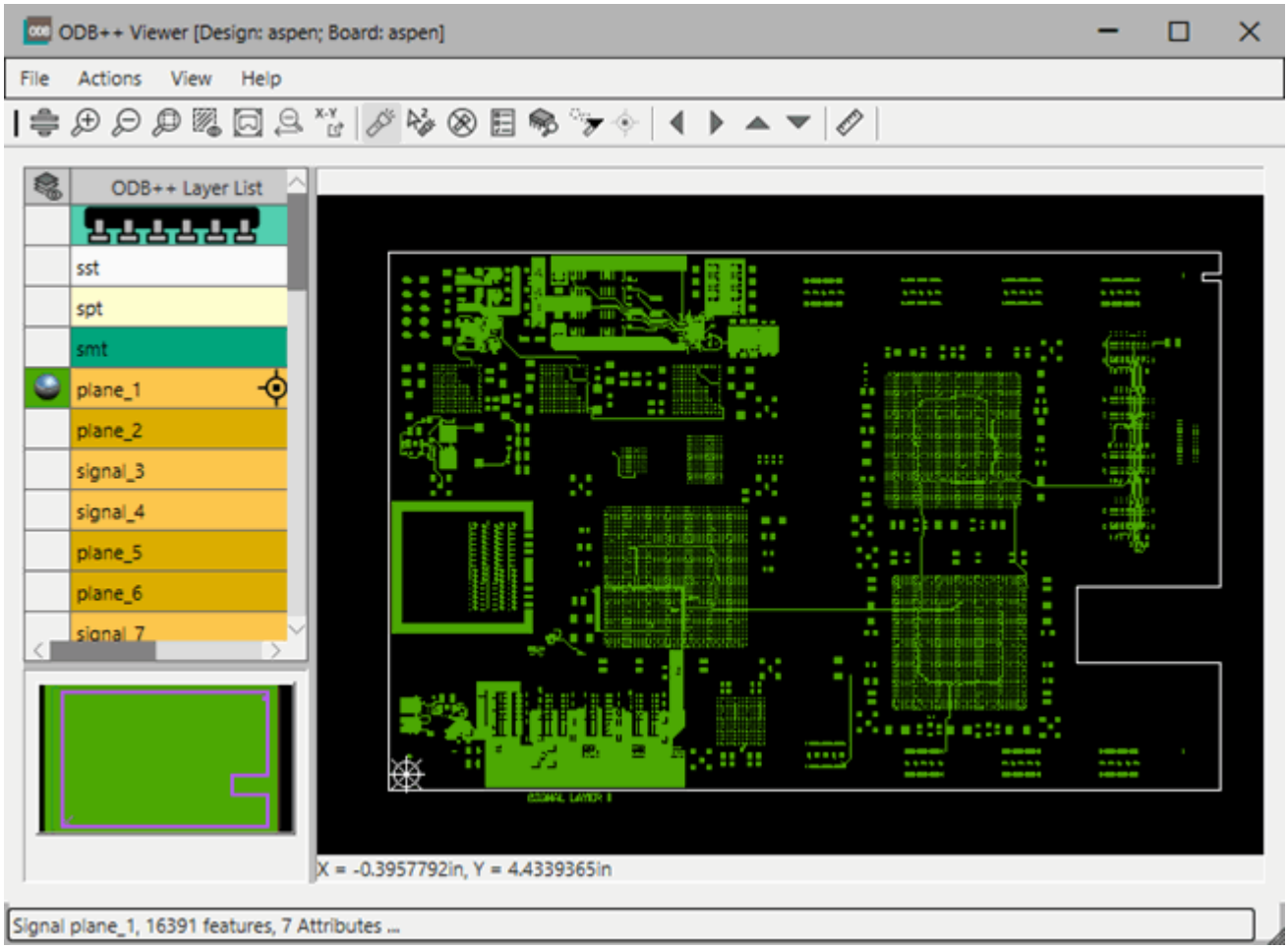
The newly imported product model is added to the top of the Product Model List.

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ODB++ Viewer Window

You use the ODB++ Viewer to view the graphic of the product model step, and information about the layers of the step.

Figure 1-1: ODB++ Viewer Window

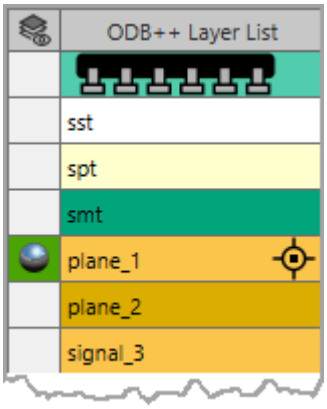
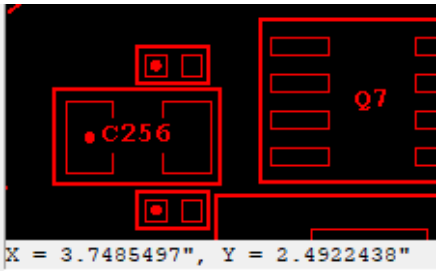
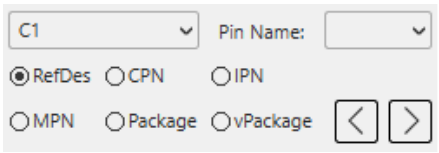
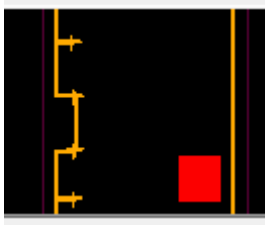


Objects

Table 1-1: ODB++ Viewer Window - Panes

Pane	Description
ODB++ Layer List	Used to choose layers to display in the Board view. The color of the cell in the "Color of features for each layer" column  indicates the color in which the layer content displays. You can use the feature histogram or the component histogram of a layer to highlight groups of entities in the graphic area.

Table 1-1: ODB++ Viewer Window - Panes (continued)

Pane	Description
	See "**Using the Features Histogram to Select or Highlight Features**" and "**Using the Components Histogram to Select or Highlight Components**" in *Getting Started With ODB++Design*.
Board View pane 	Displays the graphic representation of the chosen layers. The X and Y coordinates of the current mouse pointer position are displayed below the graphic.
Component Filter 	To display this pane, choose **View > Component Filter** or click **Component Filter** . See **Using the Component Filter Pane to Find Components**" in *Getting Started With ODB++Design*.
Board Overview pane 	Click **View an area by a popup window**  and drag a rectangle in this pane, or in the Board view, to zoom to that area in the Board view.
Data bar	The data bar at the bottom of the window displays information about highlighted features or components.

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Table 1-1: ODB++ Viewer Window - Panes (continued)

Pane	Description
Highlighted: 119; BOT #41 TP106 Part: ??? Pkg: TP30 BOT 1 Pins X=3.162 Y=-2.377 L=0.075 W=0.075 H=0 Rot=0.0 T= P=0	When multiple features or components are highlighted by double-click, the number of highlighted features or components is prefixed to the details of the first feature or component.

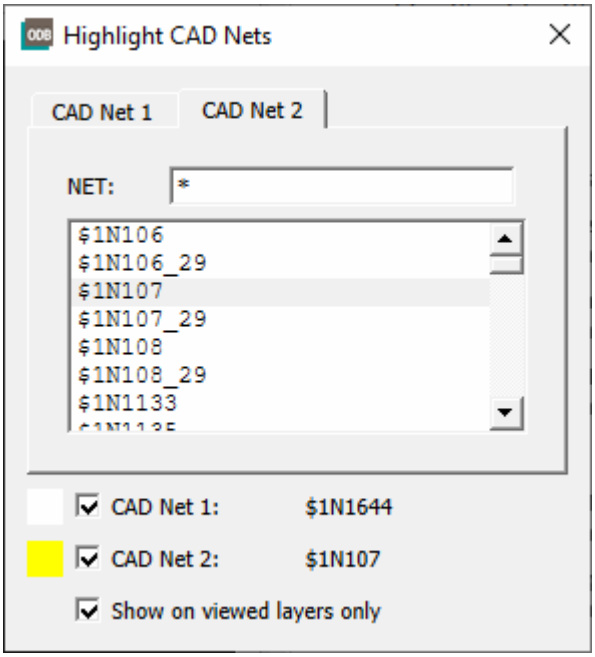
Table 1-2: ODB++ Viewer Window - File Menu Options

Tool	File Menu Option	Description
-	Open Design	Opens the Design List dialog box so you can open a design whose steps you want to view.
-	Open Board	Lists the steps of the current design, so you can open the board or panel you want to view. This option is unavailable if the design has only one board or panel.
-	Exit	Exit the ODB++ Viewer.

Table 1-3: ODB++ Viewer Window - Actions Menu Options

Tool	Actions Menu Option	Description
-	View Orientation	Open the "**View Orientation Dialog Box**" dialog box where you can rotate, mirror, or flip the board.
 	Highlight Highlight-2	Click the tool and click an object to be highlighted in the colors set for Highlighted and Highlighted-2. A symbol in the "Color of features for each layer" column of the ODB++ Layer List indicates whether one or two features are highlighted on the layer. 
	Highlight NET	Open the Highlight CAD Nets dialog box in which you can use two tabs to highlight CAD nets in two different colors. Choose a tab and select a CAD net to be highlighted, or press Shift or Ctrl to select multiple nets. The legend lists the names of the selected nets separated by semi-colons (;). The color in which the selected nets are displayed is indicated.

Table 1-3: ODB++ Viewer Window - Actions Menu Options (continued)

Tool	Actions Menu Option	Description
		 To view the features of the highlighted net on the currently displayed layers only, select the option “Show on viewed layers only”.
	Clear Highlighted	Clear highlighting applied using Highlight or Highlight-2.
   	Measure Between Points Measure Between Features Measure Between Nets Measure Annular Rings	Open a sub-menu where you can choose whether to measure between points, features, nets, or annular rings. See “**Measuring Distances**” in *Getting Started With ODB++Design*.
	Snap	Open the **Snap Dialog Box** dialog box in which you can define snap and grid options.

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Table 1-4: ODB++ Viewer Window - View Menu Options

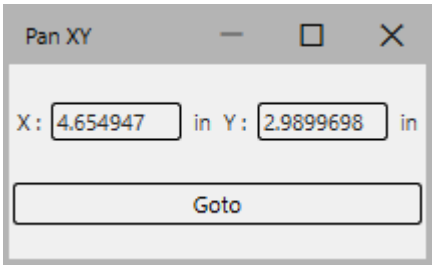
Tool	View Menu Option	Description
-	Step & Repeat Table	See **Viewing the Step and Repeat Table**.
	Matrix	Open the "**Matrix**" window displaying the layer construction, layer types and subtypes, polarity, drill intersection with the board layers (for drilled via holes), and sub-panel nesting.
	Zoom In, Zoom Out	Zoom in or zoom out.
	Zoom Area	Invoke the zoom area tool for drawing a zoom rectangle in the board viewer or overview pane.
	View an area by a popup window	Display a magnified view of a section of the board. You can open more than one popview window at the same time. See "**Zooming and Panning**" in *Getting Started With ODB++Design*.
	Zoom Home	Zoom to a view that fits the board in the graphic area.
	Previous Zoom	Returns to the zoom factor that was in effect before the most recent zoom action.
	Pan XY	Open the Pan XY dialog box.  Type the X and Y coordinates to be brought to the center of the graphic area and click **Goto**.
	Pan Left, Pan Right, Pan Up, Pan Down	Pan left, right, up, or down. (shortcuts: keyboard arrow keys).
	View Properties	Open the "**Component Information**" or "**Feature Information**" dialog box to view detailed information about the selected item.

Table 1-4: ODB++ Viewer Window - View Menu Options (continued)

Tool	View Menu Option	Description
	Component Filter	Open the Component Filter pane. See **Table 1-1**.
	Color Settings	Open the "**Colors**" dialog box that enables you to set colors for displaying items in the graphic area.
-	Component Options	Open the "**Component Display Options**" dialog box that enables you to configure some aspects of how components display in component layers.
	Show Populated Components Only / Show All Components	Toggle between showing all components and showing only populated components.
	Control	Open the "**Control**" dialog box that enables you to control the display of data in the graphic area.

Table 1-5: ODB++ Viewer Window - Help Menu Options

Tool	View Menu Option	Description
-	View Help	Opens documentation for the ODB++ Viewer. (shortcut: F1)
-	About	Displays ODB++ Viewer version and system information.

Table 1-6: ODB++ Viewer Window - Board Viewer Right-Click Menu Options

Option	Description
Zoom area	Invokes the zoom area tool so you can drag a zoom rectangle in the board viewer pane or overview pane. Equivalent to the **Zoom Area**  command.
Measure between Points	Invokes the measure tool so you can measure the distance between two points. Equivalent to the **Measure Between Points**  command.
Highlight	Invokes the highlight tool so you can highlight a feature or component. Equivalent to the **Highlight a feature or a component**  command.

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Table 1-6: ODB++ Viewer Window - Board Viewer Right-Click Menu Options (continued)

Option	Description
Clear highlighted	Clears all highlighted features and components. Equivalent to the **Clear Highlighted** command.
Toggle pile-up selection	Overlapping features make it difficult to choose an individual feature from among them. Pile-up selection mode provides a list of overlapping features that are at the board location at which you clicked, from which you can choose the feature you want. 

Table 1-7: ODB++ Viewer Window - Board Viewer Shortcuts

Shortcut	Description
Ctrl+a	Invokes the Zoom area tool for one actuation. After you have dragged a rectangle in the board viewer pane or in the overview pane, the tool that was previously in effect is in effect.
Ctrl+d down arrow	Pan down with 90% overlap.
Ctrl+e	Click on the board graphic and press Ctrl+e to pan the board viewer pane to center that point in the pane.
Ctrl+h Ctrl+Home	Zooms to a view that fits the entire board in the graphic area.
Ctrl+i Page Up	Zooms in. Equivalent to the **Zoom In** command.
Ctrl+l left arrow	Pan left with 90% overlap.

Table 1-7: ODB++ Viewer Window - Board Viewer Shortcuts (continued)

Shortcut	Description
Ctrl+m	Toggles between a four layer display and more than four layers.
Ctrl+o Page Down	Zooms out. Equivalent to the **Zoom Out** command.
Ctrl+r right arrow	Pan right with 90% overlap.
Ctrl+Shift+d Shift+down arrow	Pan down with 10% overlap.
Ctrl+Shift+l Shift+left arrow	Pan left with 10% overlap.
Ctrl+Shift+r Shift+right arrow	Pan right with 10% overlap.
Ctrl+Shift+Space	Returns to the zoomed display in memory after zooming other areas.
Ctrl+Shift+u Shift+up arrow	Pan up with 10% overlap.
Ctrl+Space	Copies the current zoomed display to memory.
Ctrl+u up arrow	Pan up with 90% overlap.
Ctrl+w	Toggles the view of features among these modes: full , outline , or width off
Shift+Home	Zooms to a view that fits the highlighted component in the board area. Equivalent to the **Zoom Home** command.

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Usage Notes

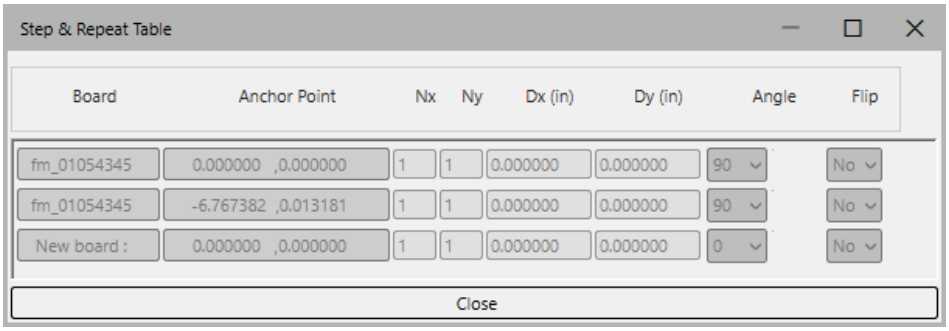
- Click one or more layers in the ODB++ Layer List to display them in the Board view.
- To use the board viewer shortcuts, you must place the mouse pointer in the Board view pane.
- Click **Toggle Units** on the toolbar to toggle the measurement units displayed in the X and Y coordinates under the Board view, and for the Measure tool, between inches and mm.

Viewing the Step and Repeat Table

If your product model contains step and repeat data, you can view panelization information in the Step & Repeat Table dialog box.

Procedure

1. Choose **View** > **Step & Repeat Table**.



2. View the panelization information in the table:

Column	Description
Step	Name of the step.
Anchor Point	Anchor point of the step.
Nx, Ny	Number of steps in the X and Y directions.
Dx, Dy	Distance between steps in the X and Y directions, in the indicated units of measure.
Angle	Rotation angle for the step inside the panel.
Flip	Indication of whether the step is flipped about the Y-axis.

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Troubleshooting

If the tool does not run as expected, review the suggested troubleshooting instructions.

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Cannot Open ODB++Design Archive File on Windows 7

If you cannot open a *tgz* file in ODB++ Viewer, this is most likely caused by incorrectly set permissions with the database. This problem can also affect your vendors and make the files unusable to them as well.

Symptoms

When attempting to open a *tgz* file, Windows 7 displays this error message:

ERROR: gen_txt-6003-Unable to open file

Causes

Incorrect permission settings in Windows 7.

Solution

To correct the permission problems with the database, perform these steps:

1. In Windows Explorer, right-click the directory where your design resides and choose **Properties**.
2. Click the Security tab.
3. Click **Edit**.
4. Add Write privileges to the appropriate users. In this case, Everyone.

> **Note**
> This procedure provides only a temporary fix for the *tgz* file you are attempting to open. As a long-term solution, your IT department must ensure that permissions are set correctly for everyone.

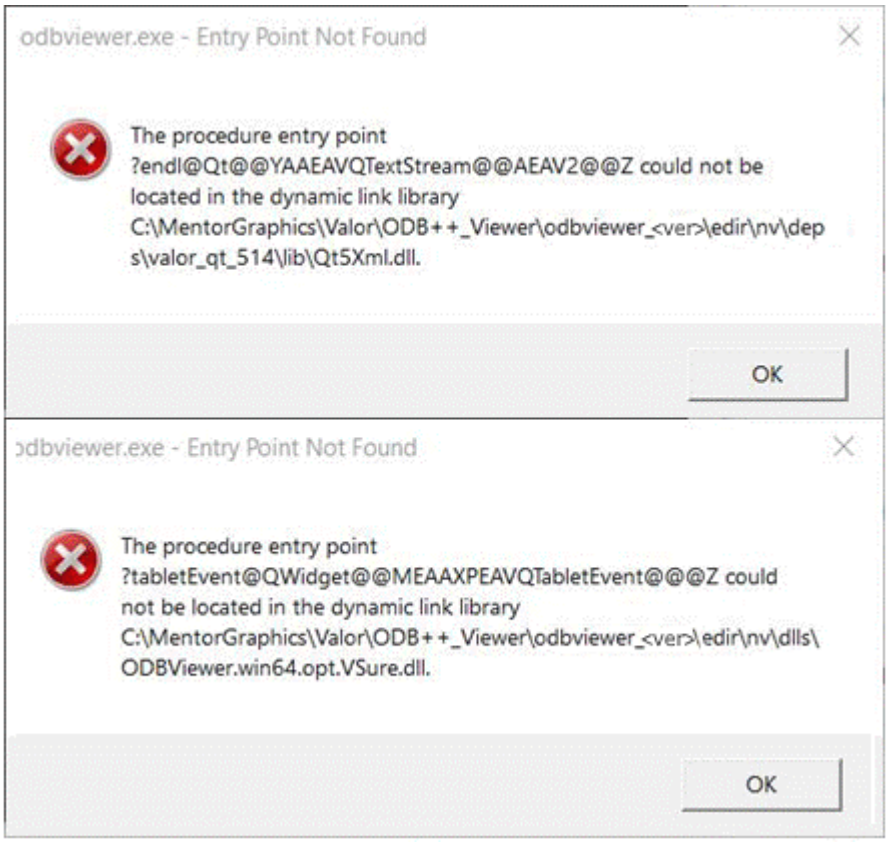
Entry Point Errors Due to Wrong DLL Usage

After successful install of ODB++ Viewer, you may receive Entry Point Not Found errors when trying to run the program.

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Symptoms

Examples of Entry Point Not Found error messages:



Causes

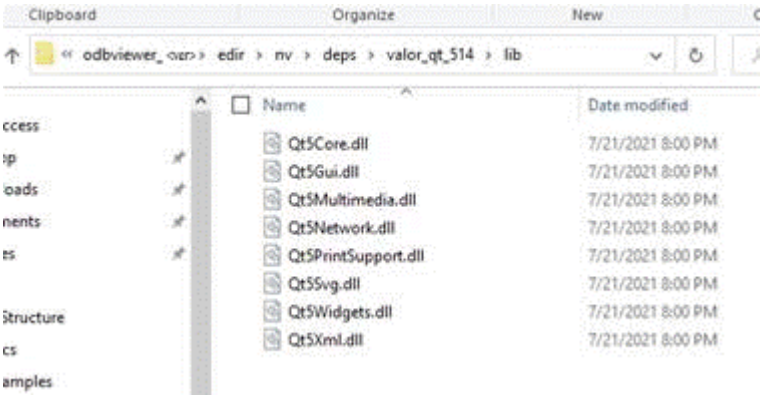
External QT DLLs are found in the *C:\Windows\System32* location, which always has the highest PATH priority. As a result, the wrong DLL files are loaded when the software is started.

Solution

Place the QT files supplied with the installation next to the main executable:

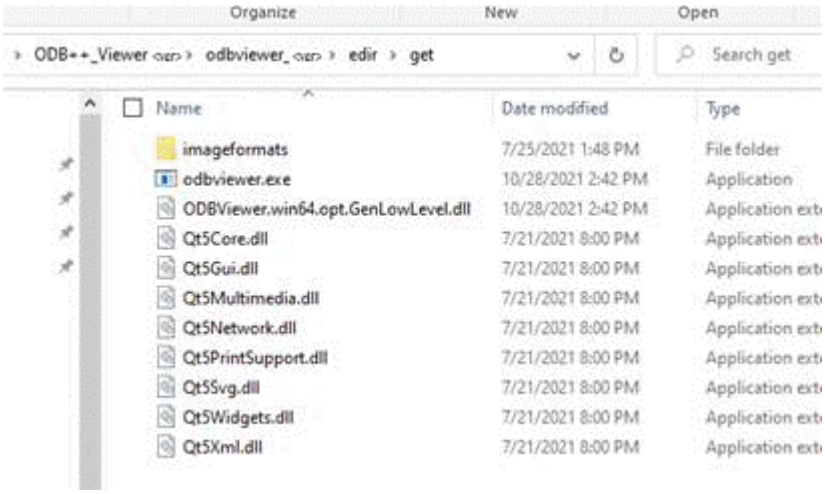
1. Copy all the files from:

   ../odbveiwer_<ver>/edir/nv/deps/valor_qt_514/lib



2. Paste the copied files to:

   ../odbveiwer_<ver>/get



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