

Visual Designer v7.0

Import Tool for PanelMate™



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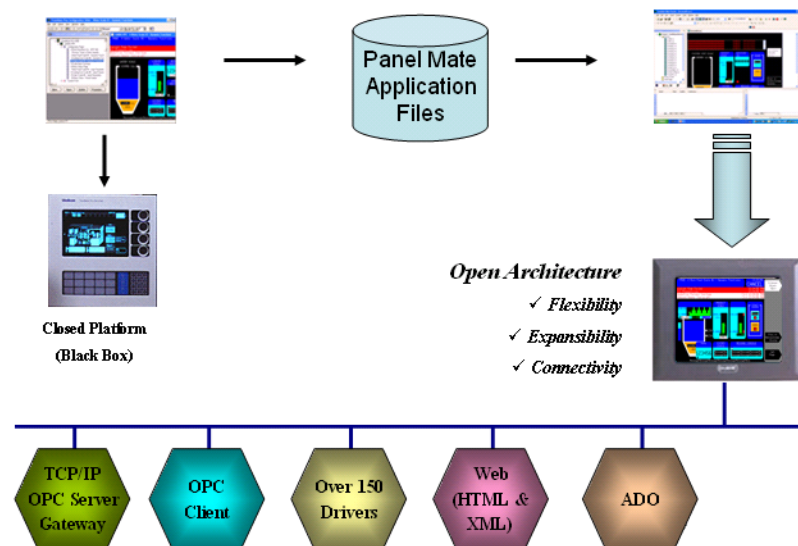
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Import Tool for PanelMate

Eaton introduces the Import Tool for PanelMate™ — a powerful, flexible, easy-to-use tool that expands the capabilities of your installed plant-floor systems. The Import Tool is a fast and intuitive wizard for importing applications created with PanelMate Plus™ software into Eaton Visual Designer.



Note: The Import Tool for PanelMate is compatible with applications based on the the PanelMate Plus Configuration Editor, Version 4.01b0. Applications created with different version of this software may be incompatible with the import tool.

CAUTION

The Import Tool for PanelMate is an add-on feature of Visual Designer. Your license needs to support this specific feature; otherwise, you will be unable to use it. Please consult your software vendor for further information.

After importing an application into Eaton Visual Designer, you can take advantage of these Visual Designer features:

- **Flexibility:** Visual Designer can run the project on any Microsoft® Windows® platform (Windows XP/Vista/7 or Windows Embedded). For example, you can run the project on devices powered with Windows Embedded, such as HMI panels and PDAs (iPAQ, Toshiba, Dell, etc.).
- **Expansibility:** You can use the Visual Designer development environment to add functionality to your project in the form of historical data, XML reports, math scripts, etc.
- **Connectivity:** Because the project is running under the Visual Designer runtime, you can take advantage of all connectivity tools embedded in the Visual Designer package, such as:
 - Communication drivers for several protocols from different manufacturers (Modbus, Profibus DP, DeviceNET, ControlNET, Siemens S7 - MPI/PPI, Siemens S5 - RK512, GE-Fanuc SNP/SRTP and many others).
 - OPC client and server interfaces.

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- XML and ADO interfaces to exchange data with third-party systems, such as Enterprise Resource Planning (ERP) systems.
- API Toolkits to integrate the project with third-party programs written in any language that supports DLLs (VB, C, C++, and so on).
- TCP/IP modules for redundant and networked projects.
- Web solution that provides remote access to your project using just a web browser, through any TCP/IP link (intranet, internet, or dial-up connection).
- Remote management and debugging tools that allow you to manage (download, upload, run, stop and debug) your project remotely from a development station.

The Import Tool's greatest advantage is how easy it is to use, which can dramatically reduce the cost and hassle of modernizing the automation systems in your facility.

Using the Import Tool for PanelMate

The Import Tool provides a simple, straightforward wizard to guide you through the process of importing PanelMate applications into your Visual Designer project.

To import a PanelMate application, you must have the following software on your computer:

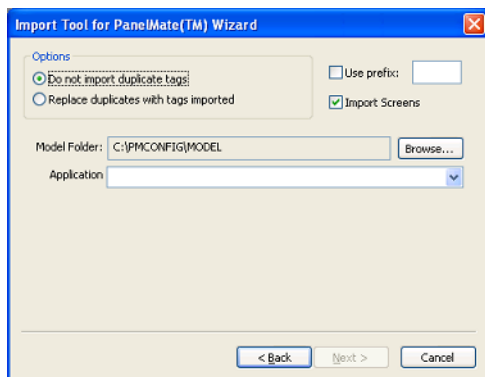
- Eaton Visual Designer with the Import Tool for PanelMate add-on.
- PanelMate programming software.
- PanelMate database files (i.e., *.db files that are usually found in the C:\PMConfig\Model directory).

Note: You can run the Eaton Visual Designer development environment on Windows XP/ Vista/7 operating systems. For detailed information about Visual Designer hardware and software requirements, see the *Visual Designer User Guide and Technical Reference*.

1. In the Visual Designer development environment, close all open project screens and worksheets.
2. On the **Home** tab of the ribbon, in the **Tools** group, click **Import Wizard**. The **Import Wizard** dialog is displayed.
3. In the **Source Type** list, select **Import Tool for PanelMate™**, and then click **Next**.

Note: You can use the Import Wizard to import application data from sources other than PanelMate applications. For more information about importing other application types, refer to the *Visual Designer User Guide and Technical Reference*.

The **Import Tool for PanelMate™ Wizard** dialog is displayed.

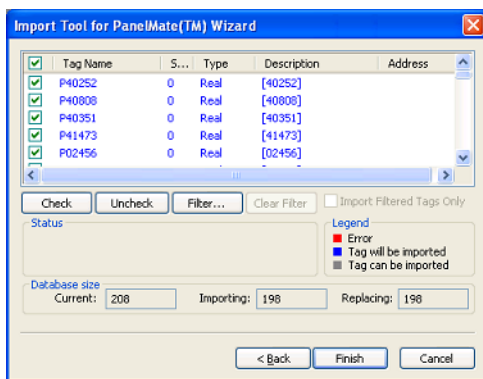


4. Use the dialog to specify the import parameters.

- a) **Do not import duplicate tags:** Select this option to prevent the Import Tool from importing tags with the same name as tags in the current Visual Designer project database.
 - b) **Replace duplicates with tags imported:** Select this option if you want the wizard to replace duplicate tag properties in the current Visual Designer project database.
 - c) **Model Folder:** This field displays the path and name of the folder where the PanelMate application database is saved. The customary location is C:\PMConfig\Model, on a computer where the PanelMate programming software is installed. To select a different folder, click **Browse**.
 - d) **Application:** If the specified model folder contains a valid PanelMate application database, then a list of all applications stored in the database will be displayed in this combo box. Select the application you want to import.
 - e) **Use prefix:** Select this option if you want to add a prefix to all imported tags, and then type the prefix in the text field.
- Because you can import multiple PanelMate applications into a single Visual Designer project, this option is provided to help you identify where the imported application tags originated and to avoid duplications.
- f) **Import Screens:** This option is selected by default. Clear this option to prevent the wizard from importing the PanelMate application screens.

5. Click **Next**.

The Import Tool will read the database and then display a new dialog that lists all of the tags in the selected PanelMate application.



6. Review the list of tags and uncheck any that should not be imported.

The tags are color-coded:

- Red tags cannot be imported. If you selected the **Do not import duplicate tags** option, then the Import Tool will not import tags that already exist in your Visual Designer project database.
- Blue tags will be imported. If you do not want to import one of these tags, clear the check-box to the left of the tag name.
- Gray tags *can* be imported but are not currently selected. Tags become gray in two circumstances:
 - You cleared the check-box to the left of an importable (blue) tag, which changes the blue tag to gray.
 - You have exceeded the number of tags allowed by your Eaton Visual Designer license. For example, if your license allows 1,500 tags and you would exceed this limit by importing the grey tags, then Visual Designer will not allow the wizard to add these tags to the project database.

You can import gray tags (by clicking the check-box to the left of the tag name), as long as you do not exceed the number of tags allowed by your license.

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7. Click **Finish**.

The PanelMate application is imported into your Visual Designer project, according to the specified parameters.

What is imported by the Import Tool for PanelMate

Because both Eaton Visual Designer and CEView are much more powerful than PanelMate, it is possible to work around the items that are not imported by implementing some minor changes in the project. If, however, your project uses one of the features that the import wizard does not import, and you think that you will spend a lot of time implementing this feature in your project, please contact your Eaton representative or go to www.eaton.com. We will analyze the feasibility of implementing that specific feature.

Graphical Interface

The graphical tools offered by Eaton Visual Designer surpass the capabilities of any other tool available on the market. Also, the same features can be available in several software products but implemented differently in each.

When you import a PanelMate application with the Import Tool, you will notice that the imported graphical interface may look slightly different from the original one. The text fonts may change, and scrollbars may appear inside some visual components. This occurs because the development philosophy at Eaton is to implement Windows standards; PanelMate applications are tied to other very specific hardware and software vendors and standards.

Despite these differences, the Import Tool creates an Visual Designer project that closely simulates the look and feel of the PanelMate user interface. After you have imported a PanelMate application, you can enhance its functionality by using the superior graphical components available in Visual Designer

Graphical Objects

The Import Tool converts every page of a PanelMate application into an Visual Designer screen file named `ScreenXX.src`, where `XX` is the number of the page. The wizard creates additional screens, with names prefixed by `Screen` and `Crt1`. These screens provide support for the dynamics of many graphical elements, and must not be removed from the project.

Visual Designer graphic components are generally more sophisticated than PanelMate elements. In order to reproduce the appearance and behavior of a PanelMate application in the Visual Designer environment, the Import Tool translates most PanelMate templates into groups of several Visual Designer objects. These groups of objects contain dynamics and VBScript code that enable them to behave like their counterparts in PanelMate.

The next table lists all the objects supported by PanelMate, and briefly describes how these objects are mapped to Visual Designer components. Some features of these components are not supported in this release of the Import Tool.

PanelMate Plus	Visual Designer	
Original Object	Converted Object	Limitations, Restrictions, and Remarks
Line	Open Polygon	None.
Rectangle	Rectangle	None.
Ellipse	Ellipse	None.
Arc	Open Polygon or Closed Polygon	The "arc" is created with consecutive lines, with a resolution of 5 degrees.
Polygon	Open Polygon or Closed Polygon	None.
Text	Text or Linked Picture	Text Font: Text in Normal, Double High and Quad fonts are converted to Visual Designer Text, with the standard Windows fonts. Text in Graphic fonts are converted to bitmaps.

PanelMate Plus Original Object	Visual Designer Converted Object	Limitations, Restrictions, and Remarks
Symbol	Group of Symbols	None.
Bitmap	Linked Picture	None.
Indicator Template	Group of Symbols	None.
Readout Template	Group of Symbols	The object does not change its color to red in an alarm condition.
Bar Template	Group of Symbols	Does not show the blinking warning (ALARM!) indicating the alarm condition.
Table Template	-	This object is not converted at all.
Bar Trend Template or Line Trend Template	Group of Symbols	<ul style="list-style-type: none"> • Bar trends and Line Trends are converted into ActiveX controls. • The object does not change its color to red in the alarm condition. • Does not show the blinking warning (ALARM!) indicating the alarm condition.
Display Template	Group of Symbols	Graphic, Double High or Quad font types are not supported. During the importing process, these fonts are converted to the available Windows font that best matches the PanelMate font.
Variable-Sized Indicator Template	Group of Symbols	None.
Variable-Sized Readout Template	Group of Symbols	The object does not change its color to red in the alarm condition.
Variable-Sized Bar Template	Rectangle + Bargraph	The object does not change its color to red in the alarm condition.
Variable-Sized Display Template	Smart Message	Graphic, Double High or Quad font types are not supported. During the importing process, these fonts are converted to the available Windows font that best matches the PanelMate font.
Variable-Sized Graphic Template	Group of Symbols	None.
Variable-Sized Control Button	Pushbutton	None.

Note: Customizations implemented in the Normal font (PanelMate dialog Screen fonts) are ignored by the Import Tool.

Special Tags for Graphic Interface Support

Some auxiliary tags and classes are created to provide support for the dynamics of the screens and graphic elements.

- Classes:
 - cControlButton
 - cControlKeypad
 - cControlTrend
- Tags:
 - PMControlButton[4]
 - PMControlKeypad
 - PMControlTrend
 - PMIsWebClient

 **CAUTION**

Do not remove the Classes and Tags mentioned in this section. If you do so, the project will not function properly.

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Alarm Configuration

PanelMate offers two types of alarms: high-low (HiLo) alarm and conditional expression alarm. Both types are supported by the Import Tool.

An auxiliary alarm tag named *[Tag Prefix]ALR[XXXX]* is created for each alarm condition, where *[Tag Prefix]* is the prefix entered in the Wizard dialog, and *[XXXX]* is a sequential number with four digits.

- For hi-lo alarms, the auxiliary alarm tag is created and its hilimit and lolimit properties are set. A Math worksheet is created to fill this tag with the result of the alarm expression defined in PanelMate. Two alarm condition entries are created in the Alarm worksheet: **Hi** and **Lo**.
- For conditional expression alarms, the auxiliary alarm tag is created, and its hilimit is set to 1. A Math worksheet is created to fill this tag with the result of the alarm expression defined in PanelMate. One alarm condition entry is created in the Alarm worksheet: **Hi**.

After the application is imported, two new Alarm worksheets are created: one for Acknowledgable alarms and the other for Non-Acknowledgable alarms.

Note: Deadband ranges for HiLo alarms are not imported. You must fill them manually, in the respective Alarm worksheet.

Security System

The current version of the Import Tool does not import the security system automatically. After importing the application, you can reconfigure the security system manually, using the [Security System](#) editor.

Communication Interface

This release implements the most important communication drivers. However, some communication settings may be different from the original configuration, due to the way that Visual Designer treats the information. Most of the applications should not be affected by these differences, but in some cases small changes will be required. The following table lists the drivers supported by the Import Tool, along with their limitations.

Protocol	PanelMate Plus Driver Name	Visual Designer Driver Name	Limitations, Restrictions, and Remarks
DF1 Serial	Allen-Bradley Serial	ABKE	<ul style="list-style-type: none">• Format fields (specified after the # character in PLC Word References) are ignored.• Addresses of only one PLC (the first in the list) are imported.• Signed and Unsigned variables will be imported as signed.• BCD 4 Data Type is not supported by Visual Designer (File Type D).
RIO (Remote I/O)	Allen-Bradley Remote I/O	STRIO	<ul style="list-style-type: none">• In order to communicate using Allen-Bradley Remote I/O, you will have to acquire a specific board for these protocols. Please refer to the STRIO driver documentation for more information about the hardware needed.• Format fields (specified after the # character in PLC Word References) are ignored.• Signed and Unsigned variables will be imported as signed.• Double words are not supported.• You cannot have PLCs from different families in the same network.• PanelMate offers four directions for Active Block Transfer: Read, Write, Common and Pass-Through. Only Read

Protocol	PanelMate Plus Driver Name	Visual Designer Driver Name	Limitations, Restrictions, and Remarks
Modbus Serial	Modicon ASCII or Modicon RTU	MODBU	<p>and Write are supported by Visual Designer. The others are converted to Read in the import process.</p> <ul style="list-style-type: none"> PanelMate supports up to 32 racks in its rack table. Visual Designer supports four racks, one for each channel. Only the four first racks in the table are imported.
Modbus Plus	Modicon Modbus Plus	MODPL	<ul style="list-style-type: none"> Format fields (specified after the # character in PLC Word References) are ignored. Addresses of only one PLC (the first in the list) are imported. Signed and Unsigned variables will be imported as signed. BCD Data Type is not supported. Char Array data types are not supported.

Note: Driver configuration can be imported only once into an Visual Designer project. If you change the communication settings of a PanelMate application and try to import it again over a previously imported application, the new settings will not be imported. You have to create a new blank Visual Designer project and import the modified PanelMate application into it.

Additional notes for Import Tool for PanelMate

- The Import Tool for PanelMate is compatible with applications based on the the PanelMate Plus Configuration Editor - Version 4.01b0. Applications created with different versions of this software may be incompatible with the Import Tool. This may occur because the way of storing these components in the database may change from one version to another, and the importer may not recognize them as valid components. If possible, try to convert your application to this version of PanelMate before importing it.
- Security:** Visual Designer offers a security model that is very different from the one supported by PanelMate. Due to this difference, the PanelMate passwords and protection configuration are not imported. After importing the application, you can reconfigure the security system for the application using the [Security System](#) editor.
- Alarms:** Alarms are also configured differently in IWS and PanelMate. In PanelMate, the alarm configuration is made inside the graphical interface components, while IWS offers separate worksheets for alarm definitions, in a more flexible architecture. For more information about alarms, look at the Alarm Configuration section in this document.
- Message Library:** PanelMate has a message library, where the messages for all the display templates are stored. After the importing process is finished, these messages are copied into the file `\Symbol\Messages.csv`, in the project directory. You can edit this file if you need to change the messages.
- System Online Labels:** This feature is ignored by the Import Tool. The application is imported using the default system labels.

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Eaton Corporation
Electrical Sector
1111 Superior Ave.
Cleveland, OH 44114
United States
877-ETN-CARE (877-386-2273)
Eaton.com

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