InTouch Machine Edition® Import Tool for PanelBuilder™

# *Users Guide*

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InTouch Machine Edition Import Tool

Schneider-Electric introduces the InTouch Machine Edition Import Tool™ — a powerful, flexible, easy-to-use tool that expands the capabilities of your installed plant-floor systems. You can use the InTouch Machine Edition Import Tool to import applications created with PanelBuilder™
(Allen-Bradley's programmer for PanelView™ Human Machine Interfaces (*HMIs*)) into InTouch Machine Edition (*VXL*) using a fast and intuitive wizard.
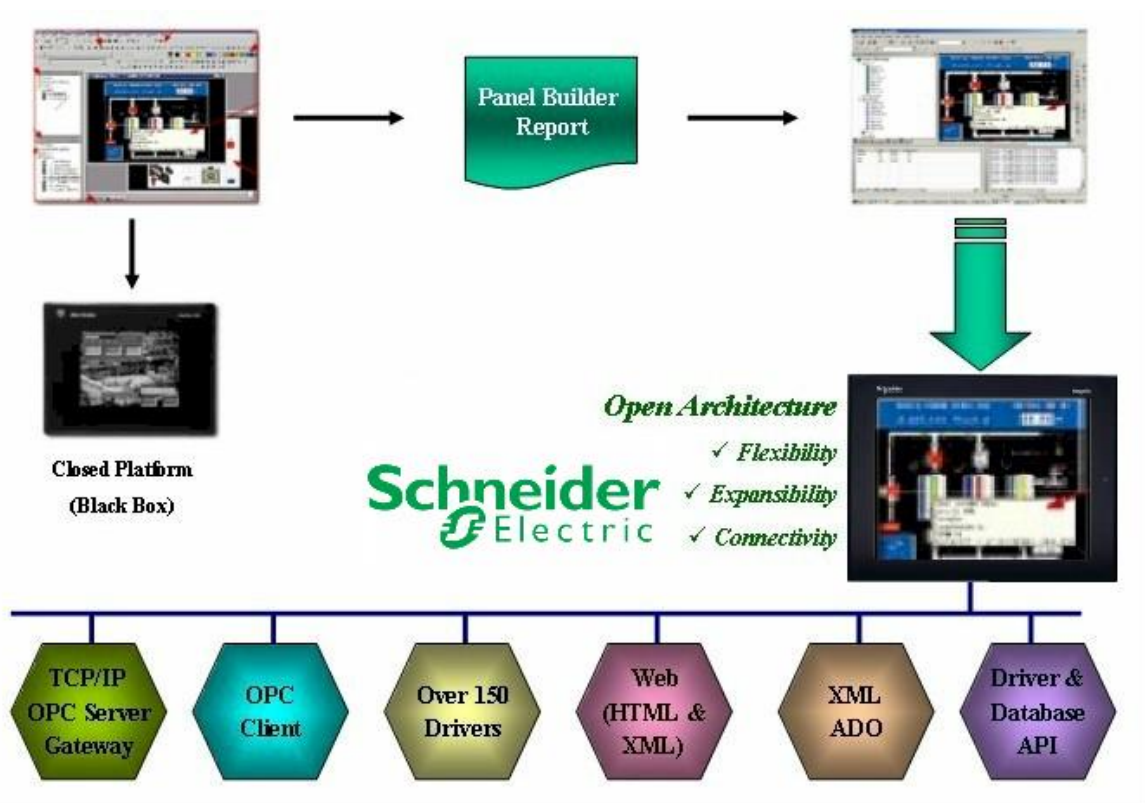
Using the InTouch Machine Edition Import Tool
to Import PanelBuilder Applications to VXL

After importing an application into InTouch Machine Edition, you can take advantage of these InTouch Machine Edition features:

- **Flexibility**: InTouch Machine Edition can run the application on any Microsoft® Windows® platform (NT/2000/XP or CE). For example, you can run the application on devices powered with Windows CE, such as HMI panels and PDAs (iPAQ, Toshiba, Dell, and so forth.)

- **Expansibility**: You can use the InTouch Machine Edition development suite to add functionality to your application (historical data, XML reports, math scripts, and so forth).

- **Connectivity**: Because the application is running under the InTouch Machine Edition runtime, you can take advantage of all connectivity tools embedded in the InTouch Machine Edition 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

  – XML and ADO interfaces to exchange data with third-party systems, such as Enterprise Resource Planning (ERP) systems

  – API Toolkits to integrate the application with third-party programs written in any language that supports DLLs (VB, C, C++, and so forth).

  – TCP/IP modules for redundant and networked applications

  – Web solution that provides remote access to your application 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 application remotely from a development station.

The InTouch Machine Edition 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.

Import Requirements

To import a PanelBuilder application you must install the following software on your computer:

1. InTouch Machine Edition with the InTouch Machine Edition Import Tool add-on
2. PanelBuilder programming software
3. PanelBuilder application file (.pba file)

> ✎ **Note:**
>
> You can run the InTouch Machine Edition development system on Windows NT/2000/XP operating systems. For detailed information about InTouch Machine Edition's hardware and software requirements, see the *InTouch Machine Edition User's Guide and Technical Reference.*

Import Procedures

The InTouch Machine Edition Import Tool provides a simple, straightforward wizard to guide you through the process of importing PanelBuilder projects into InTouch Machine Edition. This import process consists of three steps:

1. Installing a Generic / Text only printer

   > ✎ **Note:**
   >
   > To generate a PanelBuilder application report, you must use the Generic/Text only printer provided with your computer operating system. If you already have this printer installed on your system, you can skip step 1.

2. Generating a PanelBuilder application report

3. Importing the application using InTouch Machine Edition Import Wizard

Step 1 – Installing the Generic / Text Only Printer

To install the Generic / Text only printer that comes with your operating system, follow these steps:
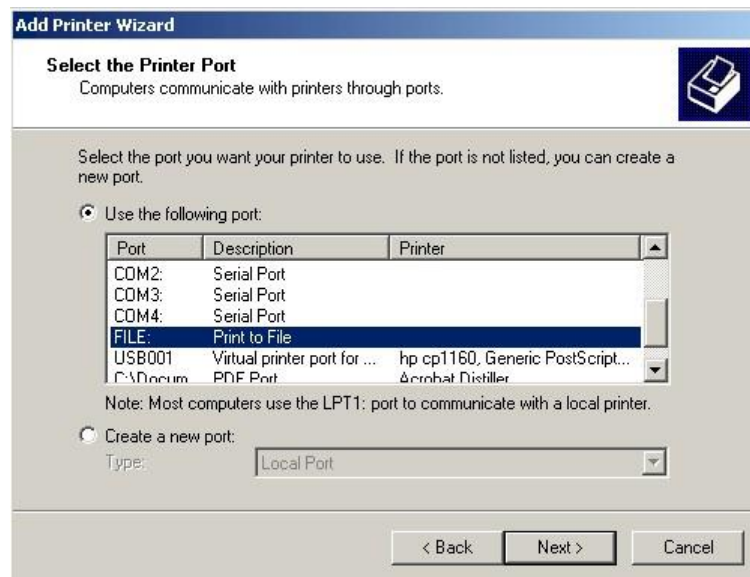
1. Click the Windows **Start** button and then select **Settings** → **Printers**.
2. In the *Printers* window, double-click the **Add Printer** icon to start the *Add Printer* wizard.
3. When the wizard *Welcome* screen displays, click **Next** to open the *Local or Network Printer* screen.

4. Click (*enable*) the **Local Printer** radio button and clear (*disable*) the **Automatically detect and install my Plug and Play printer** check box. Click **Next** to continue to the next screen.
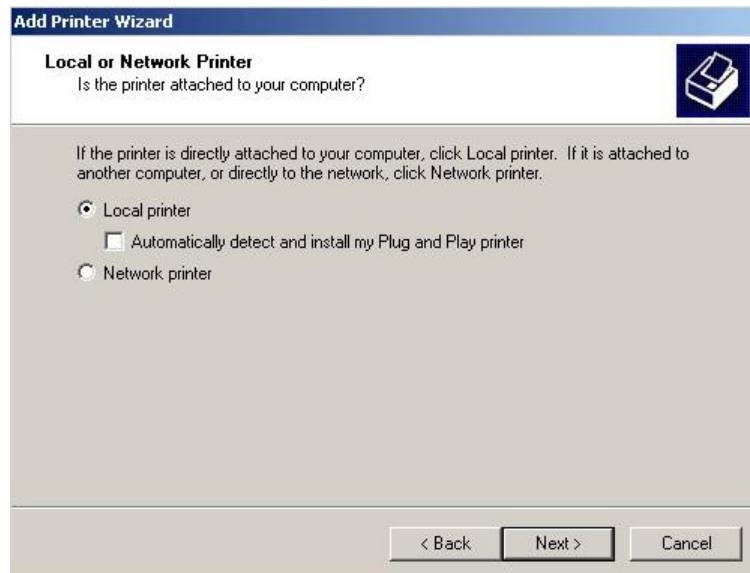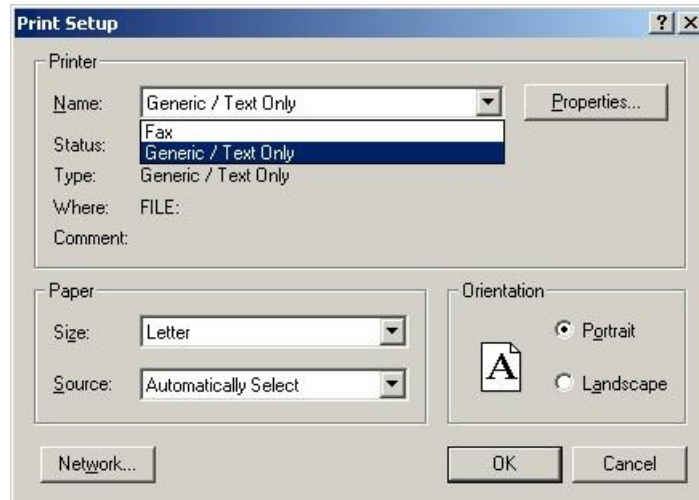

Local or Network Printer Screen

5. When the *Select the Printer Port* screen displays, select **FILE: Print to File** from the list of Ports, and then click **Next**.

6. On the *Add Printer Wizard* screen, select **Generic** from the **Manufacturers** list and select **Generic / Text Only** from the **Printers** list. Click **Next** to continue.

Adding a Generic Printer Wizard

The *Wizard* will take you to three more screens, as follows:

- *Name Your Printer*: Allows you to specify a name for the new printer and make it your default printer.

- *Printer Sharing*: Allows you to share this printer.

- *Print Test Page:* Allows you to confirm that the printer installed correctly by printing a test page.

7. You can change any of the default parameters and then click **Next** to progress through the screens, or simply accept the default settings on each screen by clicking **Next**.

8. When the *Completing the Add Printer Wizard* screen displays, verify the information displayed and if there are no changes, click **Finish**.

Final Screen

Now you are finished installing the printer. Continue to the next section and following the instructions for generating the PanelBuilder application report.

Step 2 – Generating a PanelBuilder Application Report

This section explains how to generate a PanelBuilder application report:

1. After you install the *Generic / Text only* printer, open your PanelBuilder application to generate the report.

2. Select **Tools** → **Options** from the PanelBuilder menu bar, and when the *Options* dialog displays, select the *Report Setup* tab.

3. Click (*enable*) the options shown in the following figure and then click **OK**.
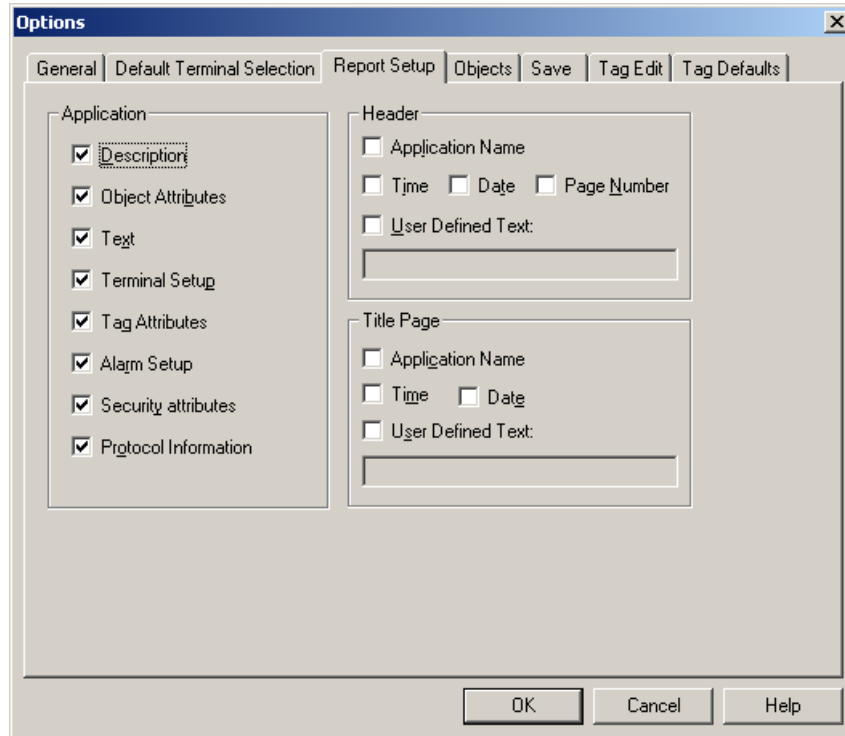
Options Dialog

4. Select **File → Reports** from the PanelBuilder menu bar.

5. When the *Print Reports* dialog displays, click the **Printer Setup** button.
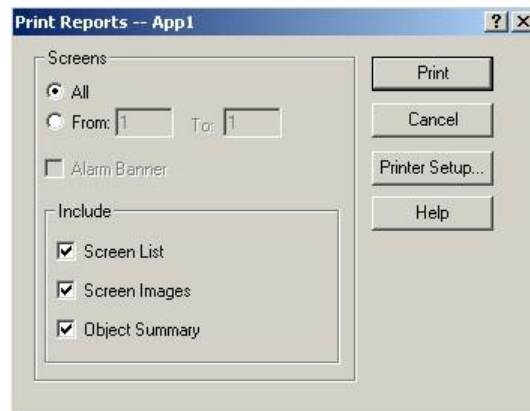
Print Reports Dialog

6. When the *Print Setup* dialog displays, click the **Name** combo-box button and select **Generic / Text only** from the list.
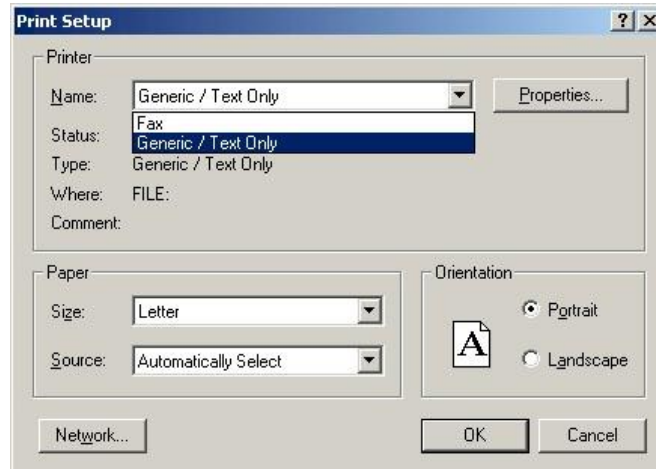
Selecting the Printer

7. In the *Paper* section, click the **Size** combo-box button and select the **A3** paper size.
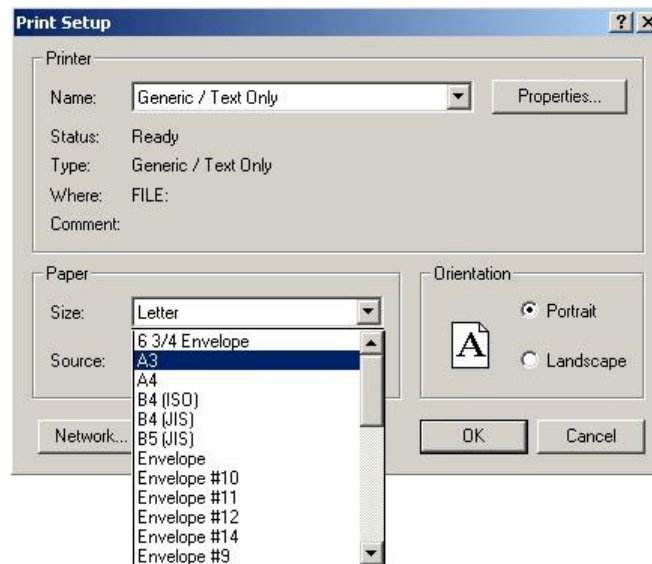
Selecting the Paper Size

8. In the *Orientation* section, click **Landscape**, and then click **OK**.
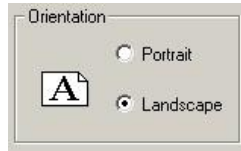
Selecting the Paper Orientation

9. When the *Print Reports* dialog displays again, clear (*disable*) the **Screen Images** check box and then click the **Print** button.

Clearing the Screen Images Check-Box

10. When the *Print to File* dialog displays, enter a file name and location for the report, and then click **OK**.

Specifying a File Name

PanelBuilder will save the resulting file to the designated location. Now you can import this file into InTouch Machine Edition, continue to the next section for instructions.

Step 3 – Importing the Application Using InTouch Machine Edition

After generating the application report, you can import the information from that report into VXL and automatically create a new VXL application with the same characteristics as your original PanelBuilder application.

Use the following procedure to import the PanelBuilder application report into VXL:

1. Start InTouch Machine Edition by selecting **Start** → **Programs** → **InTouch Machine Edition** → **InTouch Machine Edition**.

2. Select **Home > Tools > Import Wizard** to open the *InTouch Machine Edition Import Tool Wizard*:

✎ **Note:**

You can use the VXL *Import Wizard* to import application data from sources other than PanelBuilder applications. For more information about importing other application types, refer to the *InTouch Machine Edition Users Guide and Technical Reference.*

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3. When the *Import Wizard* dialog displays, select **PanelBuilder Application** from the **Source Type** list, and then click **Next**.
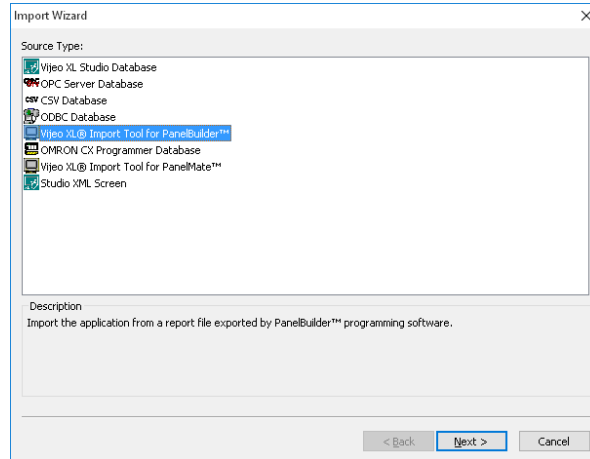
Selecting the Application to Import

The *Import PanelView Application Wizard* dialog displays:
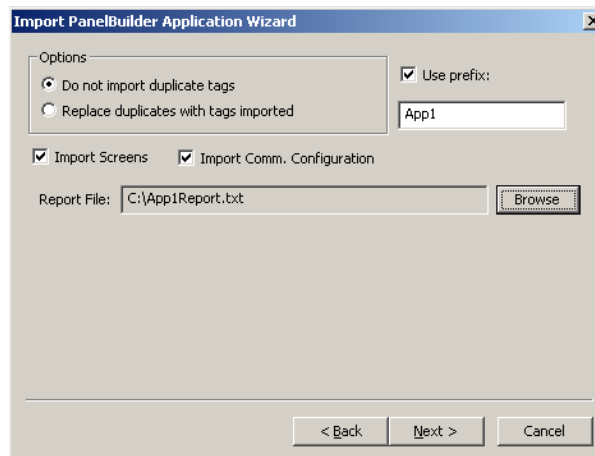
Import PanelBuilder Application Wizard

4. Use this dialog to specify the following import parameters, and then click **Next**.:

- **Do not import duplicate tags** radio button: Click (*enable*) this option to prevent the *Import PanelBuilder Application Wizard* from importing tags with the same name as tags in the current VXL application database.

- **Replace duplicates with tags imported** radio button: Click (*enable*) this option if you want the *Import PanelBuilder Application Wizard* to replace duplicate tag properties in the current VXL application database.

- **Use prefix** check-box: Click (*enable*) this option if you want to add a prefix to all imported tags. Because you can import multiple PanelBuilder applications into a single VXL application, this feature is provided to help you identify where the imported application tags originated and avoid duplications. Simply type a prefix into the text field.

- **Import Screens** check-box and text field: Clear (*disable*) this option to prevent the *Import PanelBuilder Application Wizard* from importing the PanelBuilder application screens.

- **Import Comm. Configuration** check-box: Clear (*disable*) this option to prevent the *Import PanelBuilder Application Wizard* from importing the communication properties configured for each tag in the PanelBuilder application.

- **Report File** text field: Type the name of the PanelBuilder report file you generated on page 8.

The *Import PanelBuilder Application Wizard* will read the report file and then display a new dialog listing all the tags in the report file (similar to the following figure).

List of Tags in the Report File

The tags are color-coded to indicate which tags will be imported:

- **Blue tags** will be imported. (If you *do not* want to import one of these tags, simply clear (*disable*) the check-box to the left of the tag name.)

- **Red tags** will not be imported. (If you enabled the **Do not import duplicate tags** option, the *Import PanelBuilder Application Wizard* will not import tags that already exist in the VXL application database.)

- **Gray tags** can be imported. Tags become gray in two circumstances:

  - You cleared (*disabled*) the check-box to the left of an importable (blue) tag, which changes the blue tag to gray.

  - You have met, or exceeded, the number of tags allowed by your InTouch Machine Edition license. For example, if your license allows 1,500 tags, and you would exceed this limit by importing the grey tags, VXL will not allow the *Import PanelBuilder Application Wizard* to add these tags to the VXL database.

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

5. Click the **Finish** button to import the application according to the import parameters you specified in the previous step.

🖎 **Note:**

If your application uses bitmaps (.bmp) other than those in the standard PanelBuilder list, export the bitmap file and copy it to the ***<InTouch Machine Edition Installation Folder>\Lib*** folder.

Release Notes

The InTouch Machine Edition Import Tool is still going through the development process. This first release implements the most important features. The next list illustrates all the features that are not imported automatically. Because both InTouch Machine Edition and InTouch Machine Edition CEView are much more powerful than PanelBuilder is, it is possible to work around the items that are not imported by implementing some minor changes in the application. If your application uses one of the features that you the import wizard does not import and you think that you will spend a lot of time implementing this feature on your application, please contact your InTouch Machine Edition representative or send an e-mail to *support@InTouch Machine Edition.com* and we will analyze the possibility of implementing that specific feature.

Graphical Interface

The graphical tools offered by InTouch Machine Edition overcome the expectations when compared with the other tools available in the market. When importing the application using the Import Wizard, you will realize that the imported graphical interface will look even better than the original one. However, some features available in other products are very different from the way that InTouch Machine Edition implements them. The InTouch Machine Edition development philosophy is to implement Windows standards and use simple-to-use controls, making the product easy to use. You can develop good looking screens in a few minutes. During our development research we realized that some features available in the PanelBuilder are so "unusual" that most of the applications do not use them. These features are not being imported, because most of the applications that we tested against did not use them. The following properties, unless they are explicitly declared in the graphical compatibility list (see next topic), are not imported by the import wizard: Shape, Fill Pattern, Graphic, Line Type and Print.

The next list has all the objects supported by PanelBuilder and the properties not supported by the Import Wizard. Items marked in RED are features that we found in some of the applications that we tested against and will probably be implemented for future releases. Items marked in YELLOW are minor items that do not enhance the graphical interface and will not be implemented unless there is a strong reason to do so. If there is any property associated with an object that you could not find in this list, it means that the property is not being imported and that you should contact your InTouch Machine Edition representative or send an e-mail to *support@InTouch Machine Edition.com* with the information about the specific property.

Panel Builder Object: Pushbutton – Momentary, Maintained and Latched
InTouch Machine Edition Object: Pushbutton

Write Tag: Tag / Exp
Hold Time: Not Supported
Indicator/Display Tag: Indicator
Handshake Tag: Reset
Data Type/Format: Not Supported
Contact Type: State
Initial State: Not Supported
States:
    Number: <0 - Open / 1 – Closed / Error – Additional Pushbutton with Position>
    Graphic: Not Supported
    Blink: Blink set to slow
    Value: Value
    FG Color: Not Supported
    BG Color: Color
    Text Properties: All the properties are supported, but they need to be the same for all the states.

Panel Builder Object: Screen Selector – Goto
InTouch Machine Edition Object: Button with command dynamic (Open Function)

Text Properties: All the text properties are supported.
FG Color: Not Supported
BG Color: Button Fill Color
Destination Screen: Parameter passed to Open function in the button command.

Panel Builder Object: Screen Selector - Return
InTouch Machine Edition Object: Button with command dynamic (OpenPrevious Function)

Text Properties: All the text properties are supported.
FG Color: Not Supported
BG Color: Button Fill Color
Blink: Position Dynamic associated with the object.

Panel Builder Object: Screen Selector - Goto Config Screen
InTouch Machine Edition Object: Config Screen not supported

Panel Builder Object: Screen Selector - Screen List Selector
InTouch Machine Edition Object: List Box + Button with command dynamic (Open Function)

Wrap List: List Box List Wrap Option
FG Color: List Box Border Color
BG Color: List Box Window Color
Fix Cursor At State: Not Supported
Text Properties: Wrap is the only text property not supported. The font size and background color will be the same for all the items in the screen list.

Panel Builder Object: Numeric Entry – Cursor Point
InTouch Machine Edition Object: Rectangle with command dynamic + Text I/O with keypad enabled

Text Properties: Text I/O properties
FG Color: Rectangle Liner Color
BG Color: Rectangle Fill Color
Write Tag: Text I/O Expression and Keypad function call in the command dynamic.
Indicator/Display Tag: Not Supported
Notification Tag: Not Supported
Handshake Tag: Not Supported
Decimal Point: Format Function in the Text I/O Expression.
Blink: Position Dynamic associated with the object.

Panel Builder Object: Numeric Entry – Keypad Enable
InTouch Machine Edition Object: Rectangle + Command Dynamic to open the Keypad + Rectangle with caption

Text Properties: Rectangle caption properties
FG Color: Rectangle Liner Color
BG Color: Rectangle Fill Color
Write Tag: Used in the command that activates the Keypad.
Indicator/Display Tag: Used in the rectangle caption.
Notification Tag: Not Supported
Handshake Tag: Not Supported
Decimal Point: Format Function in the Rectangle Caption.

Panel Builder Object: Numeric Entry – Inc/Dec
InTouch Machine Edition Object: Not Supported

Panel Builder Object: Control List Selector (Standard and Piloted) and Indicator - List
InTouch Machine Edition: List Box

Write Tag: Write Tag
Search Tag or Read Tag: Read/Search Tag
Control Tag: Control Enable
Block Write Start Tag: Not Supported
Data Type/Format: Integer value, LSB and Single Bit are the modes supported by InTouch Machine Edition.
Initial State: Not Supported
Write Value On Enter: Enter Reqd
Wrap List: List wap
FG Color: Border Color
BG Color: Win Color
States:
    Number: List Box State number or Error State
    Message: List Box message
    Access: Not Supported
    Value: Value
    Text Properties: Alignment option is not supported. Text Foreground Color, Font and Size need to be the same for all the states.

Panel Builder Object: Graphic Indicator – Bar Graph
InTouch Machine Edition Object: Rectangle with Bargraph Dynamic +
Rectangle with caption

Text Properties: Rectangle caption properties
FG Color: Rectangle Liner Color
BG Color: Rectangle Fill Color
Read Tag: Expression field of Bargraph Dynamic
Fill: Bargraph dynamic Foreground Color
Blink: Applied using a Color Dynamic with Blink Slow selected.
Fill From: Direction and Origentation fields from the Bargraph Dynamic.
Min/Max Range: Min and Max values in the Bargraph Dynamic.

Panel Builder Object: Graphic Indicator – Gauge
InTouch Machine Edition Object: **Not Supported**

Panel Builder Object: Graphic Indicator – Scale Linear
InTouch Machine Edition Object: Set of lines representing the scale

Blink: Position Dynamic with Blinkslow attached in each line.
FG Color: Used in the line colors.
Tickmarks: Import Wizard creates a line per each tick.

Panel Builder Object: Graphic Indicator – Scale Circular
InTouch Machine Edition Object: **Not Supported**

Panel Builder Object: Numeric Data Display
InTouch Machine Edition Object: Rectangle

Text Properties: Rectangle caption properties
Read Tag: Used in the caption text between curly brackets.

Panel Builder Object: Indicator – Message Display and Multistate Pushbutton
InTouch Machine Edition Object: Smart Message Object configured to
message display

Read Tag: Read Tag
Data Type/Format: Value property. InTouch Machine Edition supports Single Bit, LSB and Real/Integer Values.
State:
    Number: Smart Message number or Error State
    Graphic: Not Supported
    Blink: Rec Blink
    Value: Value
    FG Color: Rec (FG)
    BG Color: Rec (BG)
    Graphic: Graphic File
    Text Properties: All the properties are supported, but the Text Font and Size need to be the same for all the states.

Panel Builder Object: Graphics - Line
InTouch Machine Edition Object: Line

Blink: Implemented using position dynamic
FG Color: Color

✎ **Note:**

There is no way to determine the direction of the line based on the report information, so the Import Wizard will always import the lines from down to up, left to right. In some cases the user will have to flip the lines after finishing the import.

Panel Builder Object: Graphics – Connected Line and Free Form
InTouch Machine Edition Object: Not Supported

Panel Builder Object: Graphics – Rectangle, Ellipse and Circle
InTouch Machine Edition Object: Rectangle, Ellipse and Circle

BG Color: Fill Color
FG Color: Line Color

Panel Builder Object: Graphics – Graphic Image
InTouch Machine Edition Object: Bitmap

BG Color: Used to change the bitmap color when importing.
FG Color: Used to change the bitmap color when importing.

Panel Builder Object: Text
InTouch Machine Edition Object: Rectangle with caption

Text Properties: Rectangle caption properties
Variables: All the variables are inserted in the caption using the Format function when format is necessary.

Panel Builder Object: List Keys
InTouch Machine Edition Object: Not Supported

Panel Builder Object: Alarm List and Alarm Buttons
InTouch Machine Edition Object: Alarms list inserted on screen, but its properties are not configured automatically; Alarm buttons are not imported, but can be easily inserted in the application by the user

Communication

This release implements the most important communication drivers. However, some of the imported drivers have some differences due the way that InTouch Machine Edition treats the information. Most of the applications should not be affected by the differences, but in some cases small changes will be necessary. The next list lists all the drivers supported by the Import Wizard and lists the limitations of each one.

Panel Builder Protocol: Modbus
InTouch Machine Edition Driver: MODBU

- Signed and Unsigned variables will be imported as signed

- BCD Data Type is not supported

- Char Array data types are not supported

- Bit Arrays can only be used for readings

Panel Builder Protocols: DH+/ DH485 / DF1 / DF1 - Ethernet
InTouch Machine Edition Drivers: ABKE, ABTCP and ABENI

In order to communicate using DH+ or DH485, you will have to acquire a specific board for these protocols. Please refer to InTouch Machine Edition ABKE driver documentation for more information about the hardware needed.

- 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

- Bit Arrays can only be used for readings

- Bit Arrays for counters and timers are not allowed

> ✎ **Caution:**
>
> These drivers were tested against the following devices: PLC5, Slick PLCs, Micrologix PLCs and Micrologix 1761-NET-ENI. According to the manufacturer documentation, the driver should work with other devices. If you face any problem to stablish communication with your device, please contact your InTouch Machine Edition representative.

Panel Builder Protocols: EthernetIP and ControlNet(ControlLogix)
InTouch Machine Edition Drivers: ABCIP

The Import Wizard does not support the ControlNet network. When the ControlNet network is identified, the Import Wizard will convert all the tags using the ABCIP driver for Ethernet.

▪ Network path is not supported

✎ **Caution:**

This driver was tested against the following devices: ControlLogix5000 and FlexLogix 1761-NET-ENI. According to the manufacturer's documentation, the driver should work with other devices. If you have a problem establishing communication with your device, please contact your InTouch Machine Edition representative.

Alarm Configuration

InTouch Machine Edition products are very powerful and manage the whole alarm system without any additional PLC programming. PanelBuilder, however, requires the alarms to be configured in the PLC and is only able to display the alarm messages and provide the acknowledgment feature. Using the PanelBuilder philosophy and migrating the whole PanelBuilder system to an InTouch Machine Edition system would make applications as complex as they are in PanelBuilder. The Import Wizard has adopted a different approach by importing the information necessary to turn on the InTouch Machine Edition alarm system and displaying all the alarm messages with Acknowledge capabilities. Depending on the PanelBuilder features that you are using on your application, you will have to perform some minor configurations in your imported application. Read the following topics to understand how the Alarm Configuration is imported and which features are not imported automatically.

Alarm Banner

Instead of importing the PanelBuilder alarm banner, the Import Wizard creates an alarm banner screen with the powerful InTouch Machine Edition Industrial Alarm object and all the corresponding alarm buttons. You can eliminate some of the buttons if necessary. The alarm banner has also a default size (the size is not imported). If the object size is not appropriate for your application, you can open the Alarm_Banner screen in the development environment and customize it.

Alarm Setup

Banner Pop Up: Implemented automatically by Import Wizard by selecting the alarm banner as Pop Up or Dialog

Print Items: InTouch Machine Edition will print the alarms in the way that they are formated in the alarm object. You can customize the columns as well as the order in which the alarms will be printed. This powerful capability is imported in the alarm object that is inserted in your screen and can be customized. Because of this functionality we ignore the print items parameter.

Ack Hold Time and Snapshot: InTouch Machine Edition Industrial Alarm object is a scroll list with many capabilities. These parameters are also not applied.

Remote Ack and Use Optional Fields: InTouch Machine Edition supports remote acknowledgment by alarm message and alarm group. PanelBuilder works very differently and in some cases the user is required to associate bits of tags to acknowledge alarms. If you are using this functinality you will have to implement some minor scripts using InTouch Machine Edition math. This parameter is ignored.

Alarm Triggers

Trigger Tag: Tag used as a base to generate the alarm messages inside the imported application.

Trigger Type: The Import Wizard supports Bit and Value triggers.

Ack, Remote and Handshake and Ack All: When importing the alarm list, the Import Wizard creates an Alarm Worksheet with all the alarm messages. In order to implement this command, the user will have to implement some additional configuration in the worksheet.

Alarm Messages

The Alarm Messages are implemented using auxiliary tags. The name of the auxiliary tags is formed using the formula *[Trigger Tag]_Alr_[Value]* where:

- **Trigger Tag:** Name of the tag used as trigger.
- **Value:** Value specified in the value column.

The auxiliary tags will have the alarm HI configured to 1 (one) with the PanelBuilder alarm message. If the trigger is a Bit, the tag will be associated with the specific bit in the Driver Worksheet, otherwise it will be in a Scheduler Worksheet and will go off when the trigger value assumes the value specified in the value column. All the parameters available in the Alarm Messages configuration are available in InTouch Machine Edition, but because the concept is completely different (PanelBuilder requires that the user configures colors per individual alarms instead of configuring per groups; they are not automatically imported).

Security System

The current version of Import Wizard does not import the security system automatically.