

# EcoStruxure Operator Terminal Expert3.1 Service Pack 1B

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## 1 SOFTWARE DESCRIPTION

This software provides an integrated development environment that enables you to use a personal computer to create a Human Machine Interface (HMI) user application. The HMI user application, used by the Runtime software, can run on multiple platforms.

## 2 SYSTEM REQUIREMENTS (SCREEN EDITING SOFTWARE)

Please refer to the user documents.

From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Before Use] and then [Operating Environment].

### 2.1 Software Requirement

PDF reader is required to open the Readme.

### 2.2 Display Resolution

The software application is best viewed with a screen resolution of 1280x800 pixels or higher.

## 3 ACCESS RIGHTS

To Install, Uninstall or Operate the software application, you require administrator rights on your computer.

## 4 FOR SECURE APPLICATIONS

Please refer to the user documents.

From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Appendix] and then [For Secure Applications].

## 5 LICENSE / REGISTRATION

Please refer to Help from the Schneider Electric License Manager.

## 6 TOOLS

You can distribute the following tools installed in the [Tools] folder.

- Export Validation Tool
- User Management Tool

## 7 WHAT'S NEW

Please refer to the user documents.

From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Before Use] and then [What's New].

## 8 FIXED LIMITATIONS

### 8.1 Screen Editing

#### 8.1.1 Parts / Shapes

- Fixed an issue where column titles were not preserved on reopening a project that used strings from the Language Table for Alarm Summary and Ingredient Viewer column titles.

#### 8.1.2 Variables

##### 8.1.2.1 Symbol Link

- Fixed an issue where deleting a symbol-linked variable and then importing the symbol file again resulted in a [Undefined] source property.
- Fixed an issue where deleting a symbol-linked variable, then importing the symbol file, and saving the project resulted in an unexpected error.
- Fixed an issue where deleting a symbol-linked variable and then importing the symbol file again resulted in deleted internal variables.

#### 8.1.3 HMIGTU Series Power Box

##### 8.1.3.1 Siemens AG SIMATIC S7 MPI Direct

- You no longer have to configure 1 or more for the retry count, even if you use a speed of 187.5K.

##### 8.1.3.2 Modbus SIO Master

- When using HMIGTU Power Box Series with the Modbus SIO Master driver (any manufacturer), even if the [Speed] in the [Driver] property window is set to 57600 or more, a time out error no longer occurs.

#### 8.1.4 Companion Product Integration

- Fixed an issue where [T2TPackage installation] failed during installation of the screen editing software.
- Fixed the issue where an "Unexpected Error" appeared when opening a System Project that was on the network.

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## 8.2 Panel Operation

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### 8.2.1 Panel Start-up

- Fixed an issue where the panel did not start up properly when [Drawing Mode] was set to [Communication Priority].

### 8.2.2 Screen / Content

- Fixed an issue that prevented screens from working properly when they included a Content Display object and many external variables.
- Fixed an issue where the initial screen did not display properly when using Navigation and [Drawing Mode] was set to either [Screen Priority] or [Communication Priority].
- Fixed an issue where a project that has an array element number defined indirectly by an external variable sometimes caused the Slide Content Display object to fail in displaying content.

### 8.2.3 Parts / Shapes

#### 8.2.3.1 Picture Display

- Fixed an issue where images failed to display properly in a Picture Display object when its [Visibility] property value was changed dynamically with a variable or script.

### 8.2.4 Trigger / Operation

- Fixed an issue where rapidly changing between screens with external variables prevented the proper execution of script that had its [Screen/Content Status] trigger set to [Active].
- Fixed an issue that prevented script from running properly when its [Screen/Content Status] trigger was set to [Active] and the script used an external variable in a [If Do] statement.
- Fixed an issue where script did not run properly when:
  - The same external variables were used on the screens before and after a screen change.
  - The same external variables were used in the project's initial screen and in a global script.
- Fixed an issue where script would run twice when it was applied to a content, the script [Screen/Content Status] trigger was set to [InActive], and the content was displayed in a Slide Content Display object.
- Fixed an issue where script did not run properly when the script [Runtime Application] trigger was set to [Start] and was configured to a screen or content.

### 8.2.5 Operation Log

- Fixed an issue with the operation log where changes to properties in the Hardware Configuration screen were logged when operation log was enabled and [Object Touch] was selected.

## 8.2.6 Driver

### 8.2.6.1 OMRON Corporation CS/CJ/NJ Series Ethernet/IP

- Fixed an issue where processing on the panel failed while writing a value to the PLC.
- Fixed issue where a communication error did not automatically recover even after changing to a screen without communication issues.

## 8.2.7 HMIGTU Series Power Box

- Fixed an issue where the panel exited unexpectedly when using one of the following drivers on the HMIGTU Series Power Box.  
Schneider Electric
  - PacDrive
  - SoMachine Network

## 8.3 Cybersecurity

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- Schneider Electric Software Update is updated to version 2.5.0. (CVE-2020-7520)
- Schneider Electric License Manager is updated to version 2.5.0. (CVE-2019-8960, CVE-2019-8961)
- Fixed a buffer overflow vulnerability issue in the panel operating environment. (CVE-2020-8597)
- Fix path traversal vulnerabilities in the Screen Editing software's operating environment. (CVE-2020-7495, CVE-2020-7497)
- Fix privilege escalation vulnerability in the panel operating environment. (CVE-2020-7544)

## 9 LIMITATIONS

This section lists the limitations that are applicable to both the Screen Editing Software and Runtime.

### 9.1 License

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- In the Schneider Electric License Manager, if a version 3.0 trial license is still active, please remove it.

### 9.2 Screen Editing

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#### 9.2.1 Screen Editing Software

- You cannot search for a variable in an array variable element by its full variable name. Search for either the name of the array variable or the variable used in the array element. For example, if the search target is "Var1[Var2.Value].Value", search "Var1.Value" (name

of array variable) or "Var2.Value" (name of variable used in element). Search will not work with "Var1[Var2.Value].Value".

- When variables are created in the process of duplicating objects, undoing the duplicate operation does not undo creation of variables. Undo only removes any created objects.
- If there are a large number of variables (for example 20000) and you perform many filter actions in the Variable Editor columns, the mouse may show the busy icon in the Variable Editor. On relaunching the application, the mouse will return to its normal icon.
- Pressing [AltGr]+[S] on the keyboard behaves the same as [Save As (Alt+Ctrl+S)].
- When the language of the screen editing software is set to one of the following, the Unit Converter does not work properly on the panel.
  - French
  - German
  - Italian
  - Portuguese
  - SpanishTo resolve, change the language of the screen editing software to another language, restart the screen editing software, then change to the desired language again.
- The screen editing software may display source properties that are not described in the user manual. Do not use undocumented source properties.
- Do not use invalid characters such as the pipe "|" in the [Name] property. Some [Name] properties allow the entry of invalid characters. Even if you correct names that use invalid characters, errors related to invalid characters may not resolve automatically.

#### 9.2.1.1 Project File Name

- When using the project file with EcoStruxure Machine Expert (System Mode), the maximum length of the project file name is 42 characters. (In all other cases, the maximum is 200 characters.)

### 9.2.2 **Project File Conversion**

- When using the screen editing software with a project converted from a previous version, an error is incorrectly shown for a N-State Lamp object's [Variable] property during validation.  
Double click the error and the error will disappear.
- Before opening a project file in this version, refer to the user documents. From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Before Use] and then [Notes of Project File Conversion].

### 9.2.3 **Project File Size**

- If any of the following applies to the project file, run Screen Editing Software on a 64-bit operating system.
  - The total number of variables (Primitive and Complex) is 40000 or more
  - The total number of Symbol Links is 10000 or more

- The total number of recipe aggregates is 10000 or more
- The total number of screens and content is 150 or more

## 9.2.4 Screen / Content

- When selecting [Solid] in [Type] of Border or Horizontal / Vertical Line in Grid or Scroll Grid, do NOT use following source properties in other properties.
  - Border.Color.Value
  - HorizontalLine.Color.Value
  - VerticalLine.Color.Value
- When a Content Display object references a content screen that has any of the following objects –which have multiple states– changing the state from the tool bar in the Screen Editing software will not change the object state.
  - CheckBox
  - Lamp
  - N-State Lamp
  - Pipe
  - Radio Button
  - Switch
  - Toggle Switch

However, these objects run properly in simulation and on the panel.

- Even though the [Angle] property is visible for screen and content layouts, the property is not supported.

## 9.2.5 Parts/Shapes

### 9.2.5.1 Alarm Summary

- In an Alarm Summary part, when you change column items or change their order from the default, you cannot reference the "Columns[\*].Title" property from other properties. If you do make this reference, errors may arise or the application may not run properly.
- When using text from a Language Table for column titles in an Alarm Summary object, the titles may display incorrectly. When that happens, first open the screen/content with the Alarm Summary object and then simulate or transfer the project file.

### 9.2.5.2 N-State Lamp

- Multi-state lamp does not work properly under the following conditions.
  - [Type] = [Word]
  - [Status Change Condition] = [Bit]



- [Undefined Bit] = [Use]
- [Number of States] = Less than 33

When bits exceeding the specified number of states are ON, the text string, font, and fill set in the [Invalid] property are displayed.

But the value of the 32nd bit cannot be referenced, it does not operate properly even when this bit is turned ON.

#### 9.2.5.3 Numeric Display

- Do not use the following Numeric Display object properties as source properties.
  - HiHi
  - Hi
  - Normal
  - Lo
  - LoLo

If you associate the above as source properties of other properties, the screen editing software will display errors or the source properties will not work on the panel.

#### 9.2.5.4 Switch

- Do not use the unit converter with the source property in a Switch part's [Text] field. This sort of setting results in an error in the Screen Editing software.

#### 9.2.5.5 Web Browser

- The Web browser part does not support Serbian fonts. In the Screen Editing software, even though you can set the [Font Type] to [Serbian\_Gothic], the Serbian font will not appear on the panel.

#### 9.2.5.6 Pie

- If you associate a Pie object's [Transparency] property as the source property of a graphical object property, the screen editing software will display an error. You cannot change the Pie object [Transparency] on the panel.

#### 9.2.5.7 Polygon

- Do not associate properties with animation other than [Fill Level]. The Screen Editing software will report an error when trying to build the project.

#### 9.2.5.8 TextBox

- When using a Text object, you cannot assign a source property to the [Enable] property in the [Shadow] setting.  
Even if you use the Screen Editing software to assign a source property, it will not work properly.

#### 9.2.5.9 Content Display

- The width and height of a content display and referenced content may not be correct when the values are referenced from other properties or script.

## 9.2.6 Font

- Chinese\_Simplified\_GB2312\_Gothic will not be supported in next version, nor in later versions. Project files that use this font from previous versions will be converted to Chinese\_Simplified\_GB18030\_Gothic

## 9.2.7 Converter

- If you use 51 or more ranges in the Range Converter, change values with the spin box on the right-hand side of a field. (You cannot type numbers in into the fields directly.)
- In the Expression converter, BOOL values will not work with the "!" operator.

## 9.2.8 Script

- Sometimes scripts will not validate correctly, potentially causing unexpected behavior on the panel. Confirm graphic object and variable names in scripts are correct.
- When entering "OperationLog.ExportData" in an Operation log script block, the following properties are shown.  
"OutputFolderName"  
"OutputFileName"  
In a future version, the names of these properties will be converted to the following valid names:  
"FolderName"  
"FileName"

## 9.2.9 Trigger / Operation

- An error does not occur even if you set one of the following unsupported objects on a Touch trigger.
  - Alarm Summary
  - Hardware Configuration
  - Ingredient Viewer
  - Picture Display
  - Web Browser
  - All Layout Objects
  - Screen / Content
  - Group Object
- [Alarm Group] operations do not support system errors. In the Screen Editing software, even though you can set [Alarm Group] operation to [SystemErrorGroup], it will not run on the panel.

## 9.2.10 Alarm

- Do not associate a graphic object property to the Alarm Message property. Instead, use scripts to change alarm messages on the panel.

## 9.2.11 Variables

- Do not name a variable of type Structure as "Structure". You may use any other name.
- When copying and pasting structure variables, while the names of pasted structure variables will change, sometimes the name of child elements may also change. If that happens, delete the pasted structure variable and create a new structure variable altogether.
- You cannot use the [Duplicate] command to make multiple copies of an object with a property associated with an array variable that has a name that ends in the number zero "0", but not a number such as 10, 20 and so on.

### 9.2.11.1 Symbol Link

- After importing a symbol file, do NOT delete the associated driver and then add it again. If you need to delete and add the driver, first delete the symbol file and then delete the driver.
- The following data types are either not supported or they are converted to another data type during Symbol Link import:

#### Not Supported

- ENUM
- INTERFACE

#### Converted to a primitive type of the source

- SUBRANGE
- POINTER TO
- REFERENCE

#### Converted to Structure

- UNION
- FUNCTION\_BLOCK

- NamedBasicType in Rockwell L5K File is imported as String type in Symbol Link.
- Non-IEC formatted addresses in Unity-Pro File are imported in Symbol Link, however the addresses for these variables become blank. Please delete these variables.
- When importing a SoMachine Basic Modbus Symbol file (.SMBP), variables associated with registers %IWS and %QWS do not import correctly.
- After importing variables in Symbol Link, you can create variables with a user data type based on the Symbol Link. If you delete the Symbol Link, the Screen Editing Software

does not display an error message to identify there is no reference for the created variable. You need to manually delete these variables or create the user data type.

- After importing a TIA Symbol file, do NOT rename the folder for the imported symbol file. If you need to rename the folder, first close the project and exit the screen editing software.
- Do not import TIA Portal symbol files from external storage. Before importing, move the symbol file to a drive on the PC.
- When importing variables created in EcoStruxure Machine Expert or SoMachine, the calculation of device addresses may be incorrect.
- Importing a symbol file will fail if the names of folders and variables are the same. Make sure the names of folders and variables are unique.

### 9.2.12 Driver

- When using the following drivers, after importing the Symbol File, remove all unused variables.
  - Schneider Electric - PacDrive
  - Schneider Electric - SoMachine Network

#### 9.2.12.1 Siemens AG TIA Portal Ethernet

- You cannot import symbol files with multiple hierarchical structures. For example, TIA Portal PLC is in Group1 and Group2 and PLC2

#### 9.2.12.2 CAN in Automation CANopen Slave

- In the communication settings for the CANOpen Slave device driver, if a value does not appear in the [Speed] drop-down list, click the rectangle on the right side of the drop-down list and from the shortcut menu select [Reset].

### 9.2.13 Companion Product Integration

- While working with Machine Expert projects in EcoStruxure Operator Terminal Expert system mode, if system update does not display correctly, perform the following workaround in the Machine Expert project:  
From the [Build] menu, run the following commands.
  1. Clean All
  2. Generate Code
  3. Build All / Rebuild
  4. Save and Save in Repository
- If the System Project is on the network and you add an EcoStruxure Operator Terminal Expert project file to it, an “Unexpected Error” may appear because of a lack of user access rights. To resolve, create a System Project again in the same location on the network and add the project file.

## 9.3 Transfer

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- When you use the Screen Editing Software on a 32 bit operating system, you cannot transfer a project file to replace the system of a Vijeo Designer by EcoStruxure Operator Terminal Expert.
- In broken mode, you cannot use File System transfer to upgrade the run time before version 3.1.100.
- When transferring a project file that exceeds the maximum size limit, the Screen Editing software will sometimes show an incorrect error message. The project size limit depends on the panel.  
When transferring via USB cable or Ethernet, the Screen Editing software displays the message "Download Failed".  
On the other hand, when transferring via File System, even if you press the [Transfer] button, the panel shows no indication of an error. However, if you review the system error log, you can see a record that indicates the panel does not have enough space.
- Do not press [ALT] key during a transfer operation. Pressing the [ALT] will sometimes cause the transfer operation to fail.
- Transferring a project with many image files to the panel may take a considerable amount of time.

### 9.3.1 iPC Series and PC/AT

- When the panel uses Windows 8.1 or later Embedded operating system, during transfer you cannot use the Screen Editing software to check the status of the Write filter. Check the Write filter status before transferring.
- When using run time version 3.1 or earlier, you cannot transfer project files from version 3.1 Service Pack 1 or later.  
If you transfer the project file in the above condition, the following error message appears in the screen editing software.  
[Unable to update using download operation. Use the installer to update run time to the latest version.]  
In order to transfer, the run time must be re-installed with the same version, or later, as the screen editing software.  
Install the run time from the following path on the installation DVD.  
"¥EOTERuntime¥EcoStruxure Operator Terminal Expert Runtime.exe"  
Installing the run time erases any previously transferred project files. After installation, transfer the project files again.  
If .NET Framework is not already installed in the run time installation destination, or its version is older, .NET Framework is also installed. After .NET Framework is installed, the installation destination is restarted.  
When installing the run time, there is no need to uninstall the previously installed run time.

### 9.3.2 External Storage (SDCard / USBStorage)

- For the following data, when using USB storage as the save destination, and following the initial transfer you remove USB storage and delete the data, after the next transfer you may not be able to save the data to USB storage.
  - Alarms
  - Recipes
  - Logging

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When this occurs, use File System transfer.

## 9.4 Panel Operation

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### 9.4.1 Screen / Content

- If the Scroll Grid Content is smaller than the Content Display object, the Scroll Grid Content is magnified to the Content Display object.
- Changes in values may not be reflected in screen drawings while there are frequent system errors, you are continually accessing back up memory, and there are many changes to variable values.

### 9.4.2 Hardware Configuration Screen

- When restarting the run time by using an operation in the Hardware Configuration screen, the status of external storage may not be updated. When that happens, cycle the power on the panel.
- When implementing a filter in the filter setup screen [Filter Simplified] with the Operation Log Screen in a Hardware Configuration, sometimes items do not display correctly.

### 9.4.3 Keypad

- While the keypad is displayed, reverse display may not show properly for rapid touches. This is only a display issue and values are written properly.

### 9.4.4 Parts/Shapes

#### 9.4.4.1 Alarm Summary

- You can display up to 146 items in the Alarm Summary part's filter setup screen [Filter Simplified]. When there are more than 146 items, narrow down the list by either using the [Search] field or the [Filter Detailed] settings.
- When implementing a filter in the filter setup screen [Filter Simplified] with the Alarm Summary part, sometimes items do not display correctly.

#### 9.4.4.2 Block Trend

- After changing a Block Trend Graph's Min/Max global range on a panel, if you change the Block Trend Graph's display mode, it will not show the new range. Set the Min/Max range again.
- Rapidly changing screen/content that includes a block trend graph may cause the panel to freeze.

#### 9.4.4.3 Web Browser

- The Web browser part no longer supports TIFF and MNG image file formats.

### 9.4.5 Trigger / Operation

- When animation or change in visibility hides a pressing object, Touch trigger (Release or Click) does not occur during that. The triggers operate as if the object is not hidden.
- The more [Array] Operations with the [All] check box selected, the longer it will take for the first screen change.
- When using the [File Management] Operation, if the file or folder name uses non-ASCII characters, the file or folder name will not display correctly in the [Confirmation Message] displayed by the [File Management] Operation.
- While external storage is not recognized by the panel and an [External Storage] operation is run, there is no system error.
- The [Inactivity] trigger does not recognize calibration as a touch operation, so the inactivity status will continue.  
As a result, when using the [Inactivity] trigger, it may be executed in the middle of a calibration touch operation.  
When using the [Inactivity] trigger, consider combining with other conditions in executing operations.

### 9.4.6 Alarm

- When starting up the run time, the more Active state alarms you have in the project the longer the start up time.

### 9.4.7 Logging

- If a data logging operation occurs while a [File Management] Operation is in progress, sometimes data may not be logged depending on the logging frequency.
- SQL reserved words may not be used for the names of logging groups.
- When a logging group's [Condition Type] is [Periodic] and its interlock setting (Source property name: Interlock) changes from ON to OFF, logging will resume after the specified interval elapses since the previous logging.

### 9.4.8 Network

- If you set an IP address that duplicates another device on the local network in operation, or if you connect a device with an IP address that duplicates the panel to the local network, you cannot detect duplicating IP addresses.  
Only at runtime startup, the runtime check the IP address of the device on the local network and a system error occurs if there is duplication with the panel.  
After changing the IP address of the panel, the runtime will be rebooted, so please check whether system error has occurred after rebooting.

### 9.4.9 OPC UA Server

- When using the OPC UA server function, on first starting up the panel generates a server certificate. On first connecting to the server, the OPC UA client verifies the server's certificate.  
As the server certificate is renewed in the following cases, the OPC UA client may have to check the server certificate again.

- In the Hardware Configuration screen, from the [OPC UA Server] menu the command [Regenerate Certificate] is selected.
- Transfer via File System (This issue does not arise with Ethernet and USB cable transfer.)

## 9.4.10 Driver

### 9.4.10.1 Mitsubishi Electric Corporation -iQ-R/F Series Ethernet(SLMP Client)

- When reading 96 or more Module Access Devices (-G) at the same time, the panel may freeze or reboot unexpectedly.  
In the screen editing software, reduce the number of variables and transfer the updated project file.

### 9.4.10.2 Mitsubishi Electric Corporation - Q/QnA Series Ethernet / Q/QnA Series Serial

- When writing consecutive bits in multiples of 8 bits to the TS device, an incorrect value is set to the last device in the write operation.

## 9.4.11 HMISTO Series

### 9.4.11.1 Schneider Electric – PacDrive

- When using HMISTO Series with the Schneider Electric - PacDrive driver, sometimes connection system errors will occur.

## 9.4.12 HMIST6 Series

- Flow control XON/XOFF is not available.

### 9.4.12.1 Rockwell Automation, Inc. DH-485

- If you use a speed of 9600, sometimes a timeout error occurs.

## 9.4.13 iPC Series

- You must have 4 GB or more memory in a Schneider Electric iPC target machine to install the PC runtime.

## 9.4.14 iPC Series and PC/AT

- When using multibyte characters for file or folder names for logging, operation log, and alarm export destinations, the system locale for the operating system must be set appropriately.
- When using multibyte characters for the file or folder name for an Image Display part's image save destination, the system locale for the operating system must be set appropriately.

## 9.4.15 External Storage (SDCard / USBStorage)

- While USB storage is being continuously accessed, even though you eject the USB device, it may not work.



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Provide a function to either interrupt access to USB storage or change the storage destination.

## 10 OPEN SOURCE SOFTWARE

Open source software used in this product is protected by the copyright described below.

### 10.1 LUA Plus

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### 10.2 SQLCIPHER

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## 10.5 libpng

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## 10.6 libxml2

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