EcoStruxure Machine Expert
Compatibility and Migration
User Guide

EIO0000002842.04
03/2021

www.se.com

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Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Book

Document Scope

This document provides information to help you maintain the compatibility of your EcoStruxure Machine Expert application, project, device firmware, Vijeo-Designer application, EcoStruxure Operator Terminal Expert application, device description, and other aspects of your installation, when migrating to more advanced versions of EcoStruxure Machine Expert and its supporting libraries and software.

EcoStruxure Machine Expert is the successor of the Schneider Electric programming software SoMachine and SoMachine Motion. The compatibility to SoMachine and SoMachine Motion versions is also covered by this document.

Validity Note

This document has been updated for the release of EcoStruxure™ Machine Expert V2.0.

The characteristics that are described in the present document, as well as those described in the documents included in the Related Documents section below, can be found online. To access the information online, go to the Schneider Electric home page www.se.com/ww/en/download/.

The characteristics that are described in the present document should be the same as those characteristics that appear online. In line with our policy of constant improvement, we may revise content over time to improve clarity and accuracy. If you see a difference between the document and online information, use the online information as your reference.

Related Documents

Document title	Reference
EcoStruxure Machine Expert Functions and Libraries User Guide	EIO0000002829 (ENG); EIO0000002830 (FRE); EIO0000002831 (GER); EIO0000002833 (SPA); EIO0000002832 (ITA); EIO0000002834 (CHS)
EcoStruxure Machine Expert Programming Guide	EIO0000002854 (ENG); EIO0000002855 (FRE); EIO0000002856 (GER); EIO0000002858 (SPA); EIO0000002857 (ITA); EIO0000002859 (CHS)
EcoStruxure Machine Expert Device Type Manager (DTM) User Guide	EIO0000003047 (ENG); EIO0000003048 (FRE); EIO0000003049 (GER); EIO0000003051 (SPA); EIO0000003050 (ITA); EIO0000003052 (CHS)

Product Related Information

⚠WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop, power outage and restart.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.
- Observe all accident prevention regulations and local safety guidelines.[1]
- Each implementation of this equipment must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

[1] For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems" or their equivalent governing your particular location.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Only use software approved by Schneider Electric for use with this equipment.
- Update your application program every time you change the physical hardware configuration.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Terminology Derived from Standards

The technical terms, terminology, symbols and the corresponding descriptions in this manual, or that appear in or on the products themselves, are generally derived from the terms or definitions of international standards.

In the area of functional safety systems, drives and general automation, this may include, but is not limited to, terms such as *safety*, *safety function*, *safe state*, *fault*, *fault reset*, *malfunction*, *failure*, *error*, *error message*, *dangerous*, etc.

Among others, these standards include:

Standard	Description
IEC 61131-2:2007	Programmable controllers, part 2: Equipment requirements and tests.
ISO 13849-1:2015	Safety of machinery: Safety related parts of control systems. General principles for design.
EN 61496-1:2013	Safety of machinery: Electro-sensitive protective equipment. Part 1: General requirements and tests.
ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1:2006	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 14119:2013	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
ISO 13850:2015	Safety of machinery - Emergency stop - Principles for design
IEC 62061:2015	Safety of machinery - Functional safety of safety-related electrical, electronic, and electronic programmable control systems
IEC 61508-1:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: General requirements.
IEC 61508-2:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Requirements for electrical/electronic/programmable electronic safety-related systems.
IEC 61508-3:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Software requirements.
IEC 61784-3:2016	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions.
2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2014/35/EU	Low Voltage Directive

In addition, terms used in the present document may tangentially be used as they are derived from other standards such as:

Standard	Description
IEC 60034 series	Rotating electrical machines
IEC 61800 series	Adjustable speed electrical power drive systems
IEC 61158 series	Digital data communications for measurement and control – Fieldbus for use in industrial control systems

Finally, the term *zone of operation* may be used in conjunction with the description of specific hazards, and is defined as it is for a *hazard zone* or *danger zone* in the *Machinery Directive* (*2006/42/EC*) and *ISO 12100:2010*.

NOTE: The aforementioned standards may or may not apply to the specific products cited in the present documentation. For more information concerning the individual standards applicable to the products described herein, see the characteristics tables for those product references.

General Information

Overview

This chapter gives you general information about the different aspects of compatibility and migration situation you can encounter.

General Information

Overview

EcoStruxure Machine Expert and the devices supported by EcoStruxure Machine Expert are continuously improved. Therefore, new updates of EcoStruxure Machine Expert and its associated supports are released on a regular basis.

EcoStruxure Machine Expert provides, in most cases, a simple, and straight forward way to migrate projects created with previous versions to the present version.

NOTE:

- Launch the Schneider Electric Software Update (SESU) regularly to obtain the latest EcoStruxure Machine Expert updates.
- Launch the Schneider Electric Software Installer to obtain information on new features available for installation.
- Also visit regularly the Schneider Electric website to download the latest device firmware available.

In specific situations, you may encounter compatibility concerns regarding these updates, and actions are required to establish consistency with your existing systems and project files for the following elements:

- EcoStruxure Machine Expert files created with a previous EcoStruxure Machine Expert version, or SoMachine and SoMachine Motion versions (for example, projects, archives, exports)
- Device firmware versions (for example, controllers, HMI terminals)
- Related software (for example, Vijeo-Designer)

EcoStruxure Machine Expert Software

By installing a new version of EcoStruxure Machine Expert, new component versions are available, which include:

Component	Description
Compiler version	The compiler is the software that converts your project into the binary code that is downloaded and executed on the controller. The compiler is called when you execute a **Build**, **Build All**, **Rebuild**, or **Generate Code** action in EcoStruxure Machine Expert. The version of the compiler used is independent of your EcoStruxure Machine Expert version and can be defined by selecting: **Project > Project Settings > Compile options** By default, the latest compiler version is selected.
Device description version	The device description defines the properties of a device such as configurability, programmability, and possible connections to other devices. When you insert a device inside a project, EcoStruxure Machine Expert uses the device description to define the properties of the device. The device description version is displayed in the **Information** tab of the device editor (see EcoStruxure Machine Expert, Programming Guide).
Library version	A library is a container of variable lists, data structures (DUTs), functions, and function blocks (POU) that can be used in your projects. The versions of libraries used in an application are visible in the **Library Manager** (see EcoStruxure Machine Expert, Functions and Libraries User Guide).

There are 2 types of project files which are created by EcoStruxure Machine Expert:

File type	Description
**.project* **.library*	The version of a EcoStruxure Machine Expert project/library file is determined by the application file version and the application profile. • Project format version: The version of the application file is defined by the version of EcoStruxure Machine Expert that saved this application file. It acts as a container that specifies the storage format for the content of the application. • Project categories: Defines the versions of device descriptions, the versions of the libraries used, the compiler version, the visualization profile, and the visualization styles versions (refer to *Visualization* part of EcoStruxure Machine Expert online help). The application profile applies to the applications of the project/library.
**.projectarchive*	A project archive can be created by using EcoStruxure Machine Expert and be saved on your PC as a **.projectarchive* file. This file contains one project and can contain download information files, referenced devices, referenced libraries, the visualization profile, and the visualization styles. You can also do a source download to create an archive as an *Archive.prj* file in your controller.

The following elements can have compatibility concerns between EcoStruxure Machine Expert or SoMachine / SoMachine Motion versions:

- Project files, page 11
- Archives files, page 11
- Device firmware, page 16
- Vijeo-Designer software, page 27

Device Firmware

The firmware is the software embedded in the controller.

The firmware version is displayed in the EcoStruxure Machine Expert Logic Builder **Communication Settings** tab of the device editor (see EcoStruxure Machine Expert, Programming Guide) associated to your controller.

Vijeo-Designer Software

The Vijeo-Designer software allows you to create your HMI applications.

The EcoStruxure Machine Expert installation includes the installation files of Vijeo-Designer and can be installed or updated without the EcoStruxure Machine Expert software, but cannot be used without the EcoStruxure Machine Expert software.

For compatibility information with Vijeo-Designer, refer to the section *Compatibility of EcoStruxure Machine Expert and Vijeo-Designer Versions*, page 27.

EcoStruxure Operator Terminal Expert Software

The EcoStruxure Operator Terminal Expert software allows you to create your HMI applications.

EcoStruxure Operator Terminal Expert can be installed from the Schneider Electric Software Installer by clicking **Install Software** and selecting the product EcoStruxure Operator Terminal Expert.

For compatibility information, refer to the online help of EcoStruxure Operator Terminal Expert.

Compatibility Situations

Overview

This chapter provides information on compatibility situations you may encounter when you install a new version of the EcoStruxure Machine Expert software, acquire a new device or a new version of Vijeo-Designer software.

Using a New Version of EcoStruxure Machine Expert Software

Overview

This section describes the compatibility situations you may encounter when installing a new version of EcoStruxure Machine Expert.

Refer to the Schneider Electric Software Installer User Guide for information about the installation procedure.

Using Existing SoMachine, SoMachine Motion or EcoStruxure Machine Expert Projects

Overview

With EcoStruxure Machine Expert, you can open existing projects that were created with SoMachine, SoMachine Motion or a previous version of EcoStruxure Machine Expert. In the course of this manual, such projects will be referred to as legacy projects.

You can use legacy projects (created with SoMachine, SoMachine Motion or a previous version of EcoStruxure Machine Expert) in different ways:

- **Open** a *.project file
- **Extract Archive** a *.projectarchive file
- **Source Upload** a *.prj file from a controller

Using a project archive is the preferred method for migrating a project because a .projectarchive file contains the following additional information that is not included in a .project file:

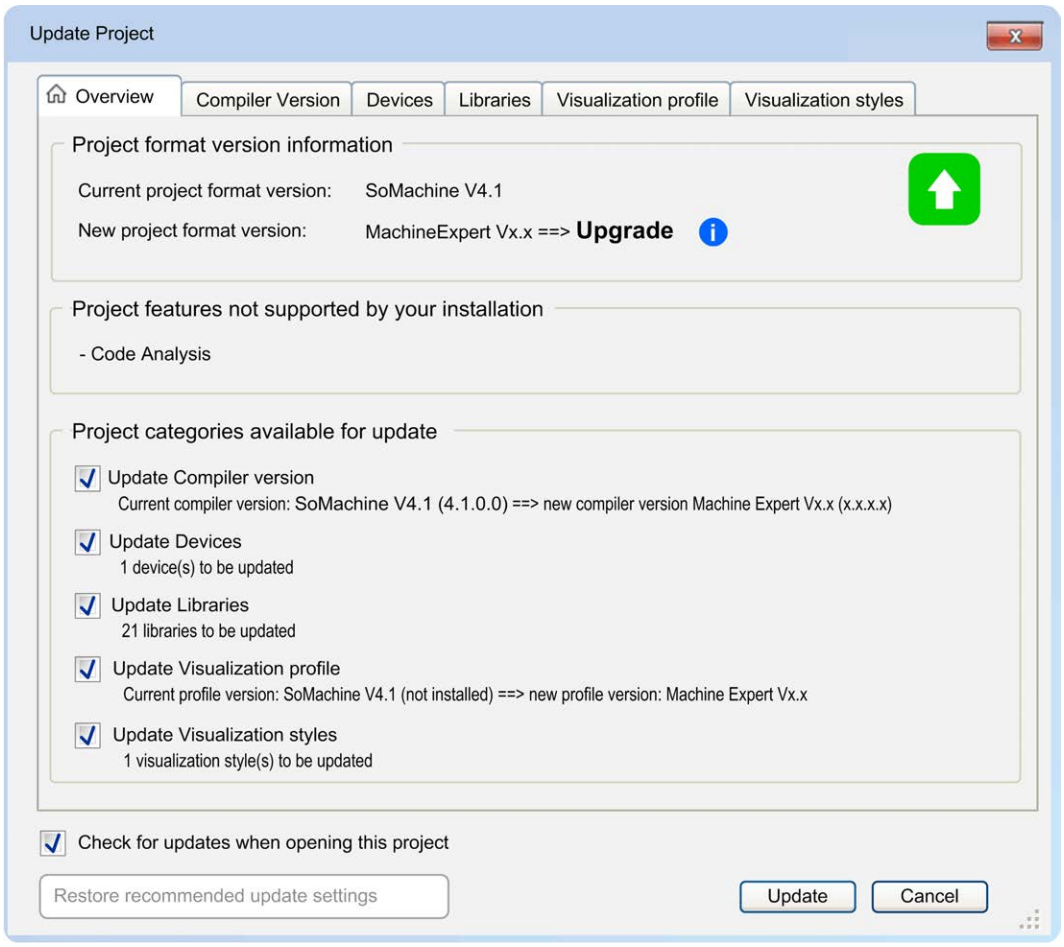
- Download information file
- Libraries
- Device description files

When you extract the archive in EcoStruxure Machine Expert, the device and library files can automatically be installed into the corresponding EcoStruxure Machine Expert repositories.

Update Project Dialog Box

When you open a legacy project, the **Update Project** dialog box is displayed. It provides an **Overview** tab and additional tabs, depending on the elements of the project that need to be updated.

The **Overview** tab provides general information:



Element	Description
Project format version information area	Provides information on the present version of the project format and the new version and indicates whether an **Upgrade** or a **Downgrade** is to be performed. Further information on the upgrade or downgrade operation is provided by the information box that is displayed upon mouse rollover on the **i** symbol.
Project features not supported by your installation area	Provides a list of project features that are not supported by the present EcoStruxure Machine Expert installation on your PC (for example, because a specific Add-on is not installed).
Project categories available for update area	Lists the project categories that need to be updated and provides a short overview. For further information, refer to the tabs specific to each category. By default, the categories are selected for update. To exclude a category from the update operation, deselect the check box.
Check for updates when opening this project option	The **Check for updates when opening this project** option is by default selected. Deactivate the option to prevent the search for updates when you open the project. To reactivate the function later on, open the **Update Project** dialog box from Logic Builder by executing the command **Project > Open "Update Project" dialog...**.
Restore recommended update settings button	After you have made modifications on this dialog box, this button is enabled. Click the **Restore recommended update settings** button to return to the default settings.

Element	Description
Update button	Click the **Update** button to perform the update according to the settings made in this dialog box. **Result**: The content of the project will be updated. When a controller is no longer supported and needs to be replaced, it will be converted into a supported device. If no replacement device is available, the device will neither be updated nor converted. It will still be available but it cannot be used in the project in EcoStruxure Machine Expert. **NOTE:** After you have updated a project or a project archive, you cannot open it with SoMachine, SoMachine Motion or a previous version of EcoStruxure Machine Expert.
Cancel button	Click **Cancel** if you do not want to make any modifications to your project. **NOTE:** If your project contains devices that are not supported by EcoStruxure Machine Expert, you can open the project with EcoStruxure Machine Expert for copying parts of the project into a new project. Nevertheless, compilation of this project is not possible.

The tabs of the **Update Project** dialog box are displayed if the respective elements of the project need to be updated. Each tab provides an option on top that allows you to consider the specific element for update or to exclude the element from the update procedure. Furthermore, detailed information is provided on the update procedure and allows you to select your preferences.

- **Compiler Version**

  The compiler is the software that converts your project into the binary code that is downloaded and executed on the controller. For further information on the compiler version, refer to the chapters *General Information*, page 9 and to EcoStruxure Machine Expert/*CoDeSys Compiler Version Mapping*, page 33. For a list of compiler messages, refer to the *Compiler Errors* document.

- **Devices**

  Installed devices that require an update are listed with name, type, and version. The suggested update action is listed in the **Recommended** column.

  The **Update to / Convert to** column allows you to select the target version or target device to be updated to or to be converted to from a list.

  - If there is no target device listed in this column, the device has become unsupported and cannot be replaced by a controller for the present EcoStruxure Machine Expert version. The earlier version that supports this device is listed in the **Recommended** column.
  - If another controller is listed in the **Update to / Convert to** column, the controller has become unsupported and needs to be converted to the target controller.

  For further information, see the list of unsupported devices, page 42 in the Appendix of this User Guide, and refer to the updating devices part (see EcoStruxure Machine Expert, Programming Guide) or the converting devices part (see EcoStruxure Machine Expert, Programming Guide) of the online help.

  NOTE: If a controller is converted into another controller, the subdevices are not converted. You have to verify them carefully and replace them manually after the project has been converted.

  The **Status** column displays symbols indicating information on the present selection, compared to the **Recommended** state.

- **Libraries**

  For further information on updating libraries, refer to the *Functions and Libraries User Guide* (see EcoStruxure Machine Expert, Functions and Libraries User Guide).

- **Visualization profile**

  The **Visualization profile** defines:

  - The names and versions of the **Visualization Libraries** that are included in the project when a visualization object is created.
  - A selection of visualization elements provided by the included libraries.

- **Visualization Styles**

  A visualization style is a collection of colors, fonts, images, and values that are defined as style properties. These style properties are available when designing visualization elements in order to help create a uniform, style-dependent appearance.

For detailed information, refer to the *Visualization* part of the EcoStruxure Machine Expert online help.

After you have confirmed your settings by clicking the **Update** button, perform a build and a download of the project to the controller for the update to become valid.

NOTE: Errors that are detected during the update process are displayed in the **Messages** view of Logic Builder.

NOTE: After the update of the project,

- You may encounter device firmware compatibility issues, page 16,
- You will no longer be able to open the project in SoMachine, SoMachine Motion or a previous version of EcoStruxure Machine Expert.

NOTE: You can still update your project at a later point in time by executing the command **Project > Open "Update Project" dialog...**, and selecting the **Check for updates when opening this project** option.

NOTE: You can open projects that contain unsupported devices, page 42 with EcoStruxure Machine Expert, but you cannot edit them. EcoStruxure Machine Expert requests you to convert to another platform.

NOTE:

- If a SoMachine or SoMachine Motion project with HMIs is loaded, it may occur that Vijeo-Designer must be started by the update. In this case, it may occur that Vijeo-Designer is only started in the background.

  Vijeo-Designer must be opened manually to continue the update.
- If a SoMachine or SoMachine Motion project with unsupported HMIs is loaded, it may occur that Vijeo-Designer is started and you are prompted to enter a reference number.

  If the reference number is not available, click **No** and the device is updated automatically to a preprogrammed type.
- If a SoMachine or SoMachine Motion project with unsupported HMIs (with control) is loaded, the HMI is converted in Vijeo-Designer to a supported HMI.

NOTE: Even if you deselect the option **Update Libraries**, it may occur that some libraries are updated. This is a result of the **Update Devices** procedure. The libraries referenced by the device descriptions of the devices selected for update are updated automatically if the **Update Devices** option is selected.

Using Your Legacy Projects

It is possible to install full versions of SoMachine, SoMachine Motion, or EcoStruxure Machine Expert (available via DVD or USB) in parallel.

There is no need to uninstall an existing version before you start the installation of a new version.

If you do not intend to use the latest features and functions of the new EcoStruxure Machine Expert version, open your project with the version it was created with.

Using Your Legacy Projects Without Update in EcoStruxure Machine Expert

If you do not want to modify your project and still want to be able to connect to a controller to which the original project was downloaded, click **Cancel** in the **Update Project** dialog box.

NOTE: If your project contains unsupported devices, page 42, you can open the project with EcoStruxure Machine Expert for copying parts of the project into a new project. Nevertheless, compilation of this project is not possible.

NOTE: If you do not update your project, the latest functionalities of EcoStruxure Machine Expert are not available. Further, you might encounter that the object code that would be generated by the present version of EcoStruxure Machine Expert would differ from the object code generated by SoMachine, SoMachine Motion or a previous version of EcoStruxure Machine Expert from which the project was originally built. In this case, you will be prompted by a message asking you to confirm that you do not want to update your project.

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Always verify that your application program will operate as it had under any previous compiler version within SoMachine, SoMachine Motion or EcoStruxure Machine Expert.
- Thoroughly test a newly compiled version of your application with the device firmware compatible with the latest version of EcoStruxure Machine Expert.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

To help ensure full compatibility of your original project, use the corresponding version of SoMachine, SoMachine Motion or EcoStruxure Machine Expert (installation may be required). For more information on how to reduce the effect of a new version of EcoStruxure Machine Expert on your projects, refer to the *Settings Helping to Preserve Compatibility*, page 18.

You can log in to your controller without building and downloading the project only if a **Download Information Files** file (**.compileinfo*) was created in the same directory as the project on your PC.

Refer to *Code Generation, Compile Information* in the *Building and Downloading Applications* chapter of the EcoStruxure Machine Expert Programming Guide.

Updating / Converting Single Devices Individually

If you click **Cancel** in the **Update Project** dialog box, the devices in your project are not updated or converted.

To update or convert single devices individually, refer to the updating devices part (see EcoStruxure Machine Expert, Programming Guide) or the converting devices part (see EcoStruxure Machine Expert, Programming Guide) of the online help.

Using Legacy Repositories

To use repositories (for example device repositories, library repositories) of a SoMachine / SoMachine Motion or previous EcoStruxure Machine Expert version installed in parallel to your present EcoStruxure Machine Expert version, proceed as follows:

Step	Action	Comment
1	In EcoStruxure Machine Expert Logic Builder, execute the command **Tools > Options...**.	The **Options** dialog box is displayed.
2	Select **Directories (Devices, Libraries, ...)** in the list on the left-hand side.	The **Directories (Devices, Libraries, ...)** dialog box of the EcoStruxure Machine Expert Logic Builder is displayed.
3	Activate the **Include legacy repositories** check box.	Now you can use the legacy repositories in your EcoStruxure Machine Expert project.

Vijeo-Designer Compatibility

The Vijeo-Designer software has its own rules which are defined in Vijeo-Designer (**Help > User Manuals > 3 Before You Begin > 3.2 Compatibility**).

Vijeo-Designer can open an application created by an earlier version and can automatically convert this application into the new version.

NOTE: The converted application can no longer be opened with an earlier version of Vijeo-Designer.

EcoStruxure Operator Terminal Expert Compatibility

For compatibility information, refer to the online help of EcoStruxure Operator Terminal Expert.

Projects with External Elements

If you did not follow the migration practices, page 18 when using SoMachine, SoMachine Motion, or a previous version of EcoStruxure Machine Expert, you may encounter the following concerns with external elements:

- A project that contains a device description installed from an EDS file, such that the device cannot be recognized by the new EcoStruxure Machine Expert version. You must install the device in the **Device Repository**,
- A project that contains a library (for example, a library created by the user) that is not part of the EcoStruxure Machine Expert installation, such that the library cannot be recognized by the new EcoStruxure Machine Expert version. You must add the library in the **Library Repository**.

Creating a Project in EcoStruxure Machine Expert

Overview

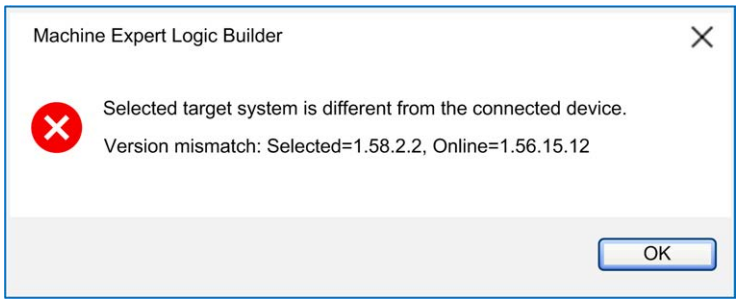
When you create a project in EcoStruxure Machine Expert:

- You may encounter device firmware compatibility, page 16 concerns.
- You will not be able to open the project in SoMachine or SoMachine Motion because it detects that the project is incompatible.
- You may not be able to open the project with earlier versions of EcoStruxure Machine Expert because it detects that the project is incompatible.

Using a Device with an Earlier Firmware Version

Overview

When logging in or downloading a project with a new version of EcoStruxure Machine Expert, you may encounter a compatibility concern with your controller firmware:



In this message, the **selected** version is the device description version of the active application; the **online** version is the firmware version of the controller.

In this case, updating the device firmware is necessary. Device firmware is provided with the EcoStruxure Machine Expert installation (managed by the Schneider Electric Software Installer) or can be found on the Schneider Electric website.

Refer to the *Settings Helping to Preserve Compatibility*, page 18 to understand how to avoid this situation in future versions of EcoStruxure Machine Expert.

Refer to the chapter *Compatibility of Controller and Device Description Versions*, page 24 to understand the compatibility rules (which device version can be downloaded to which controller firmware version).

Using a New Controller

Using a New Controller

Overview

Schneider Electric updates the controller frequently providing new features and functions. Therefore, there may be a difference between the version you receive as a new product, the present version being put into stock from the factory, and the version of your EcoStruxure Machine Expert installation.

Controller with an Earlier Firmware Version

You received a controller with a firmware version earlier than the one of the devices in your EcoStruxure Machine Expert project.

In this case, updating the controller firmware is necessary. Controller firmware is provided inside the EcoStruxure Machine Expert installation or can be found on the Schneider Electric website.

If you do not update your controller, you are able to log in to your controller only if the compatibility rule is respected, page 24.

Controller with a Later Firmware Version

You may receive a controller with a firmware version later than one of the devices in your EcoStruxure Machine Expert project.

In this case, updating the project, page 11 is necessary.

Alternatively, consider downgrading the firmware of your controller.

In general, you are able to log in to your controller only if the compatibility rule is respected, page 24.

Controller Running a Solution Project (S-Type)

If your controller is running a SoMachine V3.1 solution project, use one of the following options:

- Update, page 11 your SoMachine V3.1 solution project to EcoStruxure Machine Expert, and update the controller firmware compatible to your EcoStruxure Machine Expert version. For details, refer to the EcoStruxure Machine Expert Release Notes.
- Change the firmware of the controller by the new firmware supporting the application libraries. Device firmware is provided with the EcoStruxure Machine Expert installation (managed by the Schneider Electric Software Installer) or can be found on the Schneider Electric website.

Also refer to the not supported application libraries, page 52.

Also refer to Compatibility of Legacy S-Type Devices, page 28.

Migration Considerations

Project Archives Helping to Preserve Compatibility

Overview

Before you install a new version of EcoStruxure Machine Expert software, or when your project is completed, it is a good practice to create an archive of your project. The archive contains all files included and referenced in the project with settings and profiles.

Project archives provide the following advantages:

- You can extract the project archive to any computer with EcoStruxure Machine Expert installed. In this way, you can share your projects with others or run it on another computer.
- Creating an archive can help reduce compatibility concerns with later versions of EcoStruxure Machine Expert.

This chapter provides information on the specific settings that help to preserve compatibility.

For information on creating project archives, refer to the description of the **File > Project Archive > Save/Send Archive...** command in the EcoStruxure Machine Expert *Menu Commands Online Help*.

NOTE: Unsupported devices, page 42 are not installed on the local system and are therefore not available in the **Device Repository** dialog box.

Settings Helping to Preserve Compatibility

When you create an archive on your local computer by executing the **File > Project Archive > Save/Send Archive...** command, the **Project Archive** dialog box opens.

In the **Project Archive** dialog box, the following topics can affect compatibility and therefore you can select them when appropriate:

Information	Description
Download information files	When this is selected, the compile information (the **.compileinfo* file) is saved with your project file. This allows you to log in to the controllers with the archived project without rebuilding the project.
Referenced devices	When this is selected, the devices in the **Device Repository** of your project are saved into the archive with their versions. Devices installed with EDS files are included.
Referenced libraries	When this is selected, the libraries in the **Library Repository** of your project are saved into the archive with their versions. Third-party libraries are included.

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Compatibility Annexe

What's in This Chapter

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Overview

This section provides the annexes regarding the compatibility between EcoStruxure Machine Expert versions.

Compatibility between Controllers / Modules / Bus Couplers / Cartridges

Introduction

This section provides the compatibilities between the different devices:

- Controllers
- Modules
- Bus Couplers
- Cartridges

Compatibility Controllers / TM2 and TM3 Modules

Reference	TM241 TM251	TM262	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM2A•	1, 2	1	–
TM2D•	1, 2	1	–
TM3D•	1, 2	1, 2	–
TM3A•	1, 2	1, 2	–
TM3S•	1, 2	1, 2	–
TM3T•	1, 2	1, 2	–
TM3XTYS4	1, 2	1, 2	–
TM3XHSC202	2	2	–

Reference	TM241 TM251	TM262	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM3XHSC202G	2	2	–
TM3XFHSC202	–	2	–
TM3XFHSC202G	–	2	–
TM3XTRA1	1, 2	1, 2	–
TM3XREC1	1, 2	1, 2	–
1 Compatible via TM3BCEIP, TM3BCSL and TM3BCCO **2** Compatible when connected to the controller (local architecture)			

Compatibility Controllers / TM4 and TMS Modules

Reference	TM241 TM251	TM262	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM4ES4	✓	–	–
TM4PDPS1	✓	–	–
TMSES4	–	✓	–
TMSCO1	–	✓	–

Compatibility Controllers / TMC4 Cartridges

Reference	TM241	TM251 TM262	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TMC4AI2	✓	–	–
TMC4TI2	✓	–	–
TMC4AQ2	✓	–	–
TMC4HOIS01	✓	–	–
TMC4PACK01	✓	–	–

Compatibility Controllers / TM5 Modules

Reference	TM241 TM251	TM262M•	TM262L•	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM5SAI2L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI2H	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI4L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI4H	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI2PH	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI2TH	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI4PH	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAI6TH	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAO2L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6

Reference	TM241 TM251	TM262M•	TM262L•	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM5SAO2H	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAO4L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SAO4H	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5C24D18T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5C12D8T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5C12D6T6L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5C24D12R	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5CAI8O8VL	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5CAI8O8CL	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5CAI8O8CVL	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI2D	2, 6	1, 3, 4, 6	3, 4, 6	1
TM5SDI4D	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI4A	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI6D	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI6U	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI12D	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI16D	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDI2A	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO2T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO2S	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO2R	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO4T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO4TA	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO4R	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO6T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO8TA	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO12T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDO16T	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SEAISG	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SE1IC02505	6	1, 6	6	1, 6
TM5SE1SC10005	6	1, 6	6	1, 6
TM5SE1IC20005	2	–	–	1
TM5SE1IC01024	6	1, 6	6	1, 6
TM5SE2IC01024	6	1, 6	6	1, 6
TM5SDI2DF	2, 6	1, 6	6	1, 6
TM5SMM6D2L	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SDM12DT	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPDG12F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPDD12F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPDG5D4F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPDG6D6F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPS1•	2, 6	1, 3, 4, 6	3, 4, 6	1, 6

Reference	TM241 TM251	TM262M•	TM262L•	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM5SPS1F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPS2	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPS2F	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SPS3	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SBER2	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SBET1	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SBET7	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SD000	2, 6	1, 3, 4, 6	3, 4, 6	1, 6
TM5SE1RS2	–	1	–	1
TM5SE1MISC20005	–	–	–	1
TM5SDM8DTS	–	–	–	1
TM5CSLC•00FS	–	5	–	5
TM5SDM4DTRFS	–	1	–	1
TM5SAI4AFS	–	1	–	1
TM5STI4ATCFS	–	1	–	1
TM5SDI2DFS	–	1	–	1
TM5SDI4DFS	–	1	–	1
TM5SDI20DFS	–	1	–	1
TM5SDM8TBFS	–	1	–	1
TM5SDO2TAFS	–	1	–	1
TM5SDO2TFS	–	1	–	1
TM5SDO2DTRFS	–	1	–	1
TM5SDO4TAFS	–	1	–	1
TM5SDO4TFS	–	1	–	1
TM5SDO6TBFS	–	1	–	1
TM5SDC1FS	–	1	–	1
TM5SPS10FS	–	1	–	1

1 Compatible via TM5NS31

2 Compatible via TM5NCO1 + TM7NCOM•

3 Compatible via TMSCO1 + TM5NCO1

4 Compatible via TMSCO1 + TM7NCOM•

5 Compatible directly connected on Sercos

6 Compatible via TM5NEIP1

Compatibility Controllers / TM7 Modules

Reference	TM241 TM251	TM262M•	TM262L•	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM7BA••	2, 3, 6	2, 4, 5	2, 4, 5	1, 2
TM7BD••	2, 3, 6	2, 4, 5	2, 4, 5	1, 2
TM7SPS1A	2, 3, 6	2, 4, 5	2, 4, 5	1, 2
TM7SDM12DTFS	–	1	–	1

Reference	TM241 TM251	TM262M•	TM262L•	PacDrive 3 LMC Eco PacDrive 3 LMC Pro PacDrive 3 LMC Pro 2
TM7SDI8DFS	–	1	–	1

1 Compatible via TM5NS31 + TM5SBET7

2 Compatible via TM5NEIP1 + TM5SBET7

3 Compatible via TM5NCO1 + TM5SBET7

4 Compatible via TMSCO1 + TM5NCO1 + TM5SBET7

5 Compatible via TMSCO1 + TM7NCOM•

6 Compatible via TM7NCOM•

Compatibility of Controller and Device Description Versions

Overview

Logic controller firmware and device description versions are made of four digits: X.Y.Z.T.

An *Application.app* file can be downloaded to a controller if the device description used to create this file is compatible with the controller firmware.

Compatibility Rule

The controller firmware and the device description are compatible if the following rules are respected:

- X.Y digits must be identical
- The Z digit of the controller must be greater or equal to the Z digit from the device description.
- T digit is irrelevant

Example

A device description version 2.0.20.30 of a controller is compatible with the following controller firmware versions:

- 2.0.20.11
- 2.0.20.14
- 2.0.20.30
- 2.0.30.13
- 2.0.31.3

But it is not compatible with the firmware versions 2.0.10.8.

Compatibility of Device User Management

Overview

The user rights storage format is updated with EcoStruxure Machine Expert V2.0.

User rights included in controllers programmed with EcoStruxure Machine Expert versions prior to V2.0 must be recreated after updating their firmware version to EcoStruxure Machine Expert V2.0.

Compatibility of Lexium 62 Servo Drives and Programming Software Versions

Overview

Lexium 62 devices are available for use with SoMachine Motion or EcoStruxure Machine Expert.

Some of the new functions of Lexium 62 servo drives are only available in EcoStruxure Machine Expert as they require a hardware revision and the related product firmware version.

The compatibility table indicates the relation of hardware and programming software versions.

Compatibility Table for Servo Drives all Variants LXM62DU••• and LXM62DD•••

Commercial reference	**Hardware revision(1)**	**Safety-related functions**	**SoMachine Motion versions**			**EcoStruxure Machine Expert versions**
			V1.0...3.0	**V3.1...4.2**	**V4.3 ...4.4 SP2**	**V1.1, V1.2 and V2.0**
LXM62DU••C / LXM62DD••C	RS0•	STO (Safe Torque Off) hardwired	YES	YES	YES	YES(3)
LXM62DU••D / LXM62DD••D						
LXM62DU••E / LXM62DD••E		Safety via Sercos bus	NO	NO	YES	YES(3)
LXM62DU••F / LXM62DD••F						
LXM62P		–	YES	YES	YES	YES(3)
LXM62DU••C / LXM62DD••C	RS1•	STO hardwired	NO	YES(2)	YES	YES
LXM62DU••D / LXM62DD••D						
LXM62DU••E / LXM62DD••E		Safety via Sercos bus	NO	NO	YES	YES(3)
LXM62DU••F / LXM62DD••F						
LXM62DU••G / LXM62DD••G		STO hardwired	NO	NO	NO	YES
LXM62P		–	NO	YES(2)	YES	YES(3)

(1) See *Nameplate Descriptions* in the Lexium 62 Hardware Guide (see Lexium 62, Hardware Guide)

(2) FDR (Fast Device Replacement) with SoMachine Motion V3.1 is only possible if a firmware SoMachine Motion V3.1...4.4 SP2 is installed in the drive

(3) Limited to SoMachine Motion V4.4 SP1 features without the new features listed below

Safety via Sercos bus These drives support STO (Safe Torque Off) hardwired, controlled via digital input, plus the safety-related functions STO, SLS, SS1, SS2... controlled via Sercos.

YES Supported

NO Not compatible

Compatibility Table for Servo Drives LXM62DC13•

Commercial reference	Hardware revision(1)	Safety-related functions	SoMachine Motion versions			EcoStruxure Machine Expert versions	
			V1.0...3.0	V3.1...4.2	V4.3 ...4.4 SP2	V1.1 and V1.2	V2.0
LXM62DC13C	RS0•	STO hardwired	YES	YES	YES	YES(3)	YES(3)
LXM62DC13E		Safety via Sercos bus	NO	NO	YES	YES(3)	YES(3)
LXM62DC13C	RS1•	STO hardwired	NO	YES(2)	YES	YES(3)	YES
LXM62DC13E		Safety via Sercos bus	NO	NO	YES	YES(3)	YES(3)
LXM62DC13G		STO hardwired	NO	NO	NO	NO	YES

(1) See *Nameplate Descriptions* in the Lexium 62 Hardware Guide (see Lexium 62, Hardware Guide)

(2) FDR (Fast Device Replacement) with SoMachine Motion V3.1 is only possible if a firmware SoMachine Motion V3.1...4.4 SP2 is installed in the drive

(3) Limited to SoMachine Motion V4.4 SP1 features without the new features listed below

Safety via Sercos bus These drives support STO (Safe Torque Off) hardwired, controlled via digital input, plus the safety-related functions STO, SLS, SS1, SS2... controlled via Sercos.

YES Supported

NO Not compatible

New features compatible with EcoStruxure Machine Expert V1.1:

- Torque control
- Brake release check
- Encoderless velocity control with BMP synchronous motors
- Machine encoder input
- Incremental encoder output (encoder simulation)

New feature compatible with EcoStruxure Machine Expert V1.2:

- Lexium 62 servo drives supporting SH3 motors with Hiperface-DSL encoder and OneCable connection.

New feature compatible with EcoStruxure Machine Expert V2.0:

- Lexium 62 servo drives DC13 High Current Support for more than 90 A.

  NOTE: The support of high currents > 90 A only affects LXM62DC13 in all variants. There is no influence on other devices.

Compatibility of HMI and Controller Versions

Overview

When building a solution with some HMI and controllers communicating to each other, you must use controllers and HMI devices at the same firmware / runtime compatibility level.

When you download an application with an HMI from EcoStruxure Machine Expert, the HMI runtime is automatically updated to the latest version.

NOTICE
COMMUNICATION INTERRUPTION Do not use a different controller firmware version or a different HMI runtime other than that which is delivered with the Vijeo-Designer version specified in the Release Notes for the given EcoStruxure Machine Expert version. **Failure to follow these instructions can result in equipment damage.**

Refer to the EcoStruxure Machine Expert Release Notes for the relation between the EcoStruxure Machine Expert version, the controller firmware, and Vijeo-Designer.

Compatibility of EcoStruxure Machine Expert and Vijeo-Designer Versions

Overview

If you want to use Vijeo-Designer with EcoStruxure Machine Expert, you should not use a different version from the one provided with EcoStruxure Machine Expert.

The table provides the Vijeo-Designer version for each EcoStruxure Machine Expert version:

EcoStruxure Machine Expert Version	V1.1 / V1.1SP1	V1.2 / V1.2.x	V2.0
Vijeo-Designer Version	6.2.8.4008	6.2 SP9.1	6.2 SP11.1

For compatibility of SoMachine and SoMachine Motion versions with Vijeo-Designer versions, refer to the corresponding *Compatibility and Migration User Guide* of those software products.

Compatibility of EcoStruxure Machine Expert and EcoStruxure Operator Terminal Expert Versions

Overview

The table provides the EcoStruxure Operator Terminal Expert version for each EcoStruxure Machine Expert version:

EcoStruxure Machine Expert Version	V2.0
EcoStruxure Operator Terminal Expert Version	3.2

Compatibility of EcoStruxure Machine Expert Projects Using DTM Devices

Overview

Generally the DTM design supports only one DTM of a certain version on a PC.

Installing DTMs

Before you open a project using DTM devices, you have to install the respective DTMs using Schneider Electric Software Installer.

Launching EcoStruxure Machine Expert and Updating the Device Repository

Step	Action	Comment
1	After installing the DTMs, launch EcoStruxure Machine Expert.	The **DTM Repository** dialog box is displayed showing a list of new DTMs found.
2	Select the DTMs you want to import to the **Device Repository**.	This is done by activating the check boxes in the **Scan** column.
3	Click **Import selected DTMs**.	The selected DTMs are imported to the **Device Repository**.

Opening and Updating Your Project

Step	Action	Comment
1	After updating the **Device Repository**, open your project.	The **Update Project** dialog box is displayed.
2	Click **Update** in the **Update Project** dialog box.	The devices (and DTMs) are updated.

Compatibility of Legacy S-Type Devices

Overview

With EcoStruxure Machine Expert, legacy S-Type controllers are not supported.

Also refer to section Using a New Controller, page 17.

Replacement of S-Type Devices

After opening a project containing S-type devices, the **Update Project** dialog box, page 11 lists the legacy devices (S-type), and in a second column the associated generic devices (G-type).

Click **OK** to convert the legacy devices to the associated generic devices automatically.

Legacy S-Type Devices	Converted to G-Type Devices
M258 controllers	
TM258LF42DTS0	TM258LF42DT
TM258LF42DT4LS0	TM258LF42DT4L
TM258LF66DT4LS0	TM258LF66DT4
TM258LF42DRS0	TM258LF42DR
LMC058 controllers	
LMC058LF42S0	LMC058LF42
LMC058LF424S0	LMC058LF424

Compatibility of Controller Connection Mechanism

Overview

To connect to a controller, different mechanisms are supported. For detailed information, refer to the respective chapters in the EcoStruxure Machine Expert Programming Guide (Communication Settings in Controller Selection Mode,

Communication Settings in Simple Mode, Communication Settings in Classic Mode).

Restrictions for SoMachine / SoMachine Motion Controllers

For SoMachine / SoMachine Motion controllers (firmware compatible to SoMachine V3.1 and earlier), the following functionalities are available:

- Find controller.
- Select controller.
- Connect controller.

For SoMachine / SoMachine Motion controllers (firmware compatible to SoMachine V3.1 and earlier), the following functionalities are not available:

- Identify controller.
- Get information.

Compatibility of Namespaces

Overview

EcoStruxure Machine Expert provides a feature by which for some libraries it is mandatory to specify a namespace in front of each symbol used out of this library.

For details, refer to Namespace (see EcoStruxure Machine Expert, Functions and Libraries User Guide) in the EcoStruxure Machine Expert *Functions and Libraries User Guide*.

Therefore, after updating a project from a SoMachine version earlier than V4.0, you might encounter undeclared symbol compiler error messages.

To solve this, write the corresponding namespace, followed by a dot, in front of the undeclared symbol.

Example:

GET_STATE –> CIA405.GET_STATE.

Compatibility of Libraries

Overview

It is possible to manage concurrent communication of EtherNet/IP and Modbus TCP devices with the controller, for example TM251MESE. To make the libraries independent from the device network, the libraries, used to control some devices, have been updated in order to have the same namespace whatever the device network protocol used to control them.

Therefore, after updating a project from a SoMachine version, the following compiler error messages can be displayed:

- Unknown type: SEMFDP…
- Unknown type: SEMFDM…

These messages are raised if your application was controlling the following devices on Modbus TCP:

- Lexium 32
- Altivar 32
- Altivar 71

Updating Your Project

During the update, two libraries are automatically replaced by other libraries:

The libraries...	...are replaced by...
• FieldbusDevicesModbusTcp, and • FieldbusDevicesPLCOpen	• GMC Independent Lexium, • GMC Independent ModbusTCP, • GMC Independent Altivar, and • GMC Independent PLCOpen MC.

Once the project is updated, you have to perform the following replacements:

If the application was using…	…replace the deprecated namespace…	…by the new namespace…
PLCopen function blocks (name starting with `MC_`)	SEMFDP (FieldbusDevicesPLCopen)	GIPLC (GMC Independent PLCopen MC)
Vendor-specific function blocks for Altivar (name ending with `_ATV`)	SEMFDM (FieldbusDevicesMod-busTCP)	GIATV (GMC Independent Altivar)
Vendor-specific function blocks for Lexium (name ending with `_LXM`)	SEMFDM (FieldbusDevicesMod-busTCP)	GILXM (GMC Independent Lexium)

For more information on the namespace, refer to General Description of Libraries (see EcoStruxure Machine Expert, Functions and Libraries User Guide).

Compatibility Limitations

Updating SoMachine V1.1 Projects

Update SoMachine V1.1 projects in a first step to SoMachine V3.1. After that, update to theEcoStruxure Machine Expert version.

Updating a SoMachine V3.1 Project to EcoStruxure Machine Expert Has Influences on DTMs

After updating a project made in SoMachine V3.1 to EcoStruxure Machine Expert, the Advantys OTB DTM and the TM5-7 DTM may be unresponsive or unreliable.

If this happens, copy and paste the same DTM. The new node will work fine.

You can then remove the old DTM node.

New Process of Retrieving the State of CANopen Slaves with EcoStruxure Machine Expert

In SoMachine V3.1 it was possible to use internal variables implicitly created when adding a CANopen slave to access some information on the state of the device. For example, *MyOTB.nStatus* or *MyOTB.bSlaveAvailable*.

These internal structures are no longer supported in EcoStruxure Machine Expert. Instead, use the *GET_STATE* function blocks of the CIA405 library to retrieve the state of your CANopen slaves.

Mapping Variables on Single Bits Feature Only for EcoStruxure Machine Expert

The feature that allows you to map variables on single bits is only available for devices that have been created with EcoStruxure Machine Expert.

In EcoStruxure Machine Expert projects that have been updated from a version earlier than SoMachine V4.0, this feature is not available for the existing / updated devices.

To make the feature available for these devices, create a new device node and delete the old one.

3S CanOpenStack Library

If you use the 3S CanOpenStack library in your project, the following **Build** error may be detected and displayed in the **Messages** view:

C0035: Program name or function block instance expected instead of 'xxx'. where **'xxx'** is a POU inside your project (for example, a POU named START or STOP).

As the library 3S CanOpenStack is of the category **Intern** (not intended for direct usage), it is a best practice to enable the option **Only allow qualified access to all identifiers** in the **Properties** dialog box of this library for overcoming the **Build** error.

Variables Defined in GVL of a Library Not Correctly Shared After Updating SoMachine V3.1 Projects

When you update a SoMachine V3.1 project, the message **The POU xxx is no longer available within your compiled application but it is still configured in the symbol configuration** may be displayed in the **Messages** view. It indicates that variables defined in a GVL of a library are not correctly shared in the symbol configuration editor (see EcoStruxure Machine Expert, Programming Guide).

To share again this variable in the symbol configuration, proceed as follows:

Step	Action
1	Double-click the **Symbol Configuration** node in the **Tools tree** to open the symbol configuration editor inside the updated project in your EcoStruxure Machine Expert version.
2	Deselect the variable that is not correctly shared.
3	Close the symbol configuration editor.
4	Reopen the symbol configuration editor.
5	**Build** the application.
6	Select the variable again in the symbol configuration editor.

Connecting to Controllers in Remote Subnets

In SoMachine V3.1, a Remote Connection tool is available for connecting to controllers in remote subnets.

In EcoStruxure Machine Expert, connections to controllers in remote subnets are established with the **Communication Settings** tab in controller selection mode of the device editor (see EcoStruxure Machine Expert, Programming Guide) by using the **Connection Mode** types for **Remote TCP**. For connections via OPC, use the **Static Remote Connections** tab of the Gateway Management Console.

In EcoStruxure Machine Expert, connections to controllers in remote subnets can be established from the **Static Remote Connections** tab of the Gateway Management Console. To open the Gateway Management Console, right-click the gateway icon in the Windows notification area. For further information, refer to the *Gateway Management Console User Guide* online help.

Direct Addresses of Type `myvar AT %Mn : BOOL` Cause Error Messages

When you build a SoMachine or SoMachine Motion application (created with SoMachine V3.1 or earlier), with EcoStruxure Machine Expert, the message **Direct Address %M?n malformed** may be displayed if you use direct addresses of the type `myvar AT %Mn : BOOL` in your variable declarations.

You can skip this message by selecting **Ignore**.

In any case, this usage will lead to **Build** errors that will be displayed in the **Messages** view.

To avoid these **Build** errors, replace the address declaration by the type `myvar AT %MXn.0 : BOOL`.

EtherNet/IP Adapter Removed During Update

If you have defined an M251 MESE EtherNet/IP adapter function on an **Ethernet#1** connector in an application built with SoMachine V4.1 SP1 or earlier, and you intend to convert this application to a later version, then the EtherNet/IP adapter previously configured will be deleted.

Limitations for SoMachine V4.1 SP2 or V4.2 Applications Including the EtherNet/IP Adapter Service

Starting from firmware V4.0.4.x (SoMachine V4.1 SP2) for M251MESE and V4.0.5.x (SoMachine V4.2) for M241 and M251MESC, the EtherNet/IP adapter service has the following limitations:

- The File Object is removed.
- The Modbus Object is removed.
- The value displayed for the RPI (Requested Packet Interval) parameter is not valid for M251MESE with SoMachine earlier than V4.1SP2 and for M241 with SoMachine earlier than V4.2.
- The RUN/IDLE status of the *PLC_R* structure is not valid.
- The UCMM (Unconnected Message Manager) Error Count and Class 3 Error Count of the *PLC_R* structure are not valid.

Different Behavior of the TM3 Bus When Updating SoMachine V4.2 Applications to SoMachine V4.3

When you update an application from SoMachine V4.2 to EcoStruxure Machine Expert, this may lead to a different M241 Logic Controller / M251 Logic Controller behavior on the TM3 bus:

SoMachine version	Default behavior if an error is detected	Default value of Parameter *TM3_BUS_W_IOBUSERRMOD*
V4.2	I/O exchanges continue on the TM3 bus.	*IOBUS_ERR_PASSIVE*
V4.3	I/O exchanges are stopped on the TM3 bus by the logic controller.	*IOBUS_ERR_ACTIVE*

To preserve the behavior of SoMachine V4.2, set the parameter *TM3_BUS_W_IOBUSERRMOD* to *IOBUS_ERR_PASSIVE*. For further information, refer to the *M241 / M251 PLCSystem Library Guide* (see Modicon M251 Logic Controller, System Functions and Variables, PLCSystem Library Guide).

Modbus IOScanner for Serial Line: `Read/Write (FUNC23)` Is Not Transformed Automatically

`Read/Write (FUNC23)` used in Modbus IOScanner for Serial Line in SoMachine V3.1 or earlier is not automatically transformed to *Read (FUNC03)* and *Write*

(FUNC16) in EcoStruxure Machine Expert if the slave does not support the *Read/Write* function.

Modify the application manually by separating the *Read/Write* function into one *Read* and one *Write*.

Devices Imported from EDS Files Are Not Updated

Whenever you update a SoMachine or SoMachine Motion project file containing devices for which no new device description files are installed in the present EcoStruxure Machine Expert device repository, these devices are not recognized by EcoStruxure Machine Expert. This applies in particular to devices imported from EDS files.

To avoid this, install these devices before updating your project. For further information, refer to the chapters Using Existing SoMachine or SoMachine Motion Projects with EcoStruxure Machine Expert, page 11 and Migration Considerations, page 18.

Updating Library Parameters of a POU

If you have renamed parameters of a POU for a library between versions, the old parameter names will still be used in the POU code.

In order to use the new parameter names, execute the **Update Parameters** command manually on the corresponding POU call usage.

For a description of this command, refer to the *SoMachine Menu Commands Online Help* section of the EcoStruxure Machine Expert Online Help.

Slider on Web Visualization Corrupted

When updating a project created with SoMachine or EcoStruxure Machine Expert V1.2.x or earlier versions, slider elements used in Web Visualizations may be displayed without a scale.

This is because, for compatibility reasons, existing sliders are not updated automatically during the project update. To update the element manually, update the scale proportion property of the slider by editing the property and accepting the present value.

For sliders without a scale, the show scale property has to be temporarily set.

EcoStruxure Machine Expert/CoDeSys Compiler Version Mapping

Overview

The following mapping table gives an overview of which CoDeSys compiler version is used by default in a certain EcoStruxure Machine Expert or SoMachine or SoMachine Motion version.

SoMachine

SoMachine Software Version	Mapped Display Version	CoDeSys Compiler Version
SoMachine V1.0	V1.0.10.0	3.2.2.43
SoMachine V1.1	V1.1.10.0	3.3.1.2
SoMachine V2.0 RL1	V2.0.18.8	3.3.1.40
SoMachine V2.0 RL2	V2.0.20.20	3.3.1.40
SoMachine V3.0	V3.0.14.5	3.4.1.50
SoMachine V3.1	V3.1.10.1	3.4.1.90
SoMachine V4.0	V4.0.0.0	3.5.3.60

SoMachine Software Version	Mapped Display Version	CoDeSys Compiler Version
SoMachine V4.1	V4.1.0.0	3.5.3.82
SoMachine V4.1 SP1	V4.1.0.1	3.5.3.83
SoMachine V4.1 SP1.1	V4.1.0.2	3.5.3.84
SoMachine V4.1 SP1.2	V4.1.0.3	3.5.3.85
SoMachine V4.1 SP2	V4.1.0.4	3.5.3.86
SoMachine V4.2	V4.1.0.4	3.5.3.86
SoMachine V4.3	V4.1.0.5	3.5.3.87

SoMachine Motion

SoMachine Motion Software Version	Mapped Display Version	CoDeSys Compiler Version
SoMachine Motion V1.0	V1.31.10.0	3.3.2.10
SoMachine Motion V1.1	V1.32.19.0	3.4.0.21
SoMachine Motion V1.2	V1.33.19.0	3.4.1.16
SoMachine Motion V3.0	V1.34.25.0	3.4.3.22
SoMachine Motion V3.1	V1.35.20.0	3.4.4.30
SoMachine Motion V3.1 SP1	V1.36.35.0	3.5.1.41
SoMachine Motion V4.0	V4.0.0.0	3.5.3.40
SoMachine Motion V4.1	V4.1.0.0	3.5.3.130
SoMachine Motion V4.2	V4.2.0.0	3.5.6.52
SoMachine Motion V4.3 SP1	V4.31.0.0	3.5.7.70
SoMachine Motion V4.4	V4.4.0.0	3.5.10.52
SoMachine Motion V4.4 SP1	V4.41.0.0	3.5.10.100

EcoStruxure Machine Expert

EcoStruxure Machine Expert Software Version	Mapped Display Version	CoDeSys Compiler Version
EcoStruxure Machine Expert V1.1	Machine Expert V1.1 (V1.1.0.0)	3.5.12.80
EcoStruxure Machine Expert V1.1 SP1	Machine Expert V1.1 SP1 (V1.1.1.0)	3.5.12.82
EcoStruxure Machine Expert V1.2 / V1.2.x	Machine Expert V1.1 SP1 / V1.2 (V1.11.0.0)	3.5.12.82
EcoStruxure Machine Expert V2.0	Machine Expert V2.0	3.5.16.84

The mapped display version is used for example in the **Project Settings > Compile Options** dialog and the **Update Project** dialog box.

Device Conversion

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Conversion of ATV32 to ATV320 Devices

Overview

Convert an ATV32 device configuration to an ATV320 device configuration by using the SoMove configuration software. As a prerequisite, the configuration file (*.psx) corresponding to the ATV32 device to convert is required.

Procedure Overview

The migration of ATV32 to ATV320 devices is performed in three steps that are described in this document:

Step	Action
1	Generating the ATV32 configuration file (*.psx), page 35.
2	Converting the ATV32 device configuration to an ATV320 device configuration, page 36.
3	Importing the converted ATV320 project into EcoStruxure Machine Expert, page 36.

How to Generate the ATV32 Configuration File

The following procedure describes how to generate the ATV32 configuration file (*.psx) directly from the device by using SoMove V2.6 or later:

Step	Action	Result
1	Launch SoMove.	The SoMove start page opens.
2	Execute the command **Tools > Edit Connection / Scan**.	–
3	In the **Edit Connection** dialog box, select the connection settings that correspond to the ATV32 device you want to convert. For further information, refer to the SoMove online help.	–
4	Click **Apply**.	The **Edit Connection** dialog box is closed.
5	Execute the command **Transfer > Load from Device** from the SoMove start page.	–
6	Select a file to save the SoMove project.	–
7	Select the file type **SoMove project files (*.psx)**.	–
8	Click **Save**.	The upload process starts.

How to Convert ATV32 to ATV320 Devices

To convert an ATV32 to an ATV320 device, perform the following steps:

Step	Action	Result
1	Launch SoMove.	The SoMove start page opens.
2	Execute the command **Tools > Device Conversion**.	The **Device Conversion** dialog box opens.
3	Select the ATV32 configuration file (*.psx) that you want to convert, and click **Open**.	The **Device Conversion for ATV32** dialog box opens.
4	Select **ATV320** from the **Select Target** list and click **Convert**.	The **Select ATV320** dialog box opens.
5	Select the option **ATV320 Book** or **ATV320 Compact** according to your requirements.	The compatible **Reference**, **Firmware Version**, **Supply Voltage**, and **Nominal Power** parameters are displayed for the selected option.
6	Click **OK**.	The message **Device conversion is successful** is displayed.
7	Click **OK** to close the message.	The converted ATV320 project opens.

How to Import the Converted ATV320 Project Into EcoStruxure Machine Expert

To import the converted ATV320 device configuration into EcoStruxure Machine Expert, perform the following steps:

Step	Action	Result
1	Launch SoMove.	The SoMove start page opens.
2	Execute the command **Tools > Edit Connection / Scan**.	–
3	In the **Edit Connection** dialog box, select the connection settings that correspond to the ATV320 device you want to update. For further information, refer to the SoMove online help.	–
4	Click **Apply**.	The **Edit Connection** dialog box is closed.
5	Execute the command **Transfer > Store to Device**.	–
6	Close SoMove.	–
7	Open your EcoStruxure Machine Expert project, and select **Altivar 320** in the **Devices tree**.	–
8	Upload the device configuration for the ATV320 device. For more information, refer to the Device Type Manager (DTM) - User Guide (see EcoStruxure Machine Expert, Device Type Manager (DTM), User Guide).	–

Replacing an ATV32 by an ATV320 Without Modifying the EcoStruxure Machine Expert Project

Procedure Overview

Replacing an ATV32 by an ATV320 device is performed in six steps that are described in this document:

Step	Action
1	Verify if it is necessary to activate the compatibility mode **ATV32** in the ATV320. For further information, refer to the paragraphs of this map describing *How to Verify Whether the Compatibility Mode ATV32 Must be Activated*, page 37 for the different field buses.
2	Convert the ATV32 device configuration to an ATV320 device configuration.
3	Transfer the converted ATV320 device configuration to the ATV320 device.
4	Replace the ATV32 device by an ATV320 device.
5	Activate the compatibility mode **ATV32** in the ATV320, if required. For further information, refer to the paragraphs of this map describing the different ways to activate the compatibility mode ATV32 in the ATV320, page 38.
6	Save the ATV320 to the fast device replacement (FDR) server if you intend to use this feature.

How to Verify Whether the Compatibility Mode ATV32 Must be Activated

The following procedure describes the three initial steps that need to be performed to verify whether the compatibility mode must be activated. The subsequent steps depend on the fieldbus you are using. They are listed in separate paragraphs:

Step	Action	Result
1	Open the EcoStruxure Machine Expert project and navigate to the ATV32 node in the **Devices tree**.	–
2	Double-click the ATV32 node.	The device configuration view is displayed.
3	Verify the settings as described in the following paragraphs: • On CANopen, page 37. • On EtherNet/IP, page 37. • On Modbus TCP, page 38.	–

How to Verify Whether the Compatibility Mode ATV32 Must be Activated on CANopen

Perform the following steps on CANopen to verify whether the compatibility mode must be activated:

Step	Action	Result
1	Select the check box **Enable Expert Settings**.	The **CANopen Remote Device** tab is extended to display further parameters.
2	Verify the check boxes in the **Checks at Startup** section: • **Check Product Number** • **Check Revision Number**	–

If...	Then ...
If the check box **Check Product Number** is selected,	Then you need to activate the compatibility mode **ATV32** in the ATV320.
If the check box **Check Revision Number** is selected,	Then you will probably not be able to replace the device without modifying the EcoStruxure Machine Expert project.

How to Verify Whether the Compatibility Mode ATV32 Must be Activated on EtherNet/IP

Perform the following step on EtherNet/IP to verify whether the compatibility mode must be activated:

Step	Action	Result
1	In the device configuration view, open the **Target settings** tab.	–
2	Verify the check boxes: • **Check Product Code** • **Check Major Revision** • **Check Minor Revision**	–

If...	Then ...
If the check box **Check Product Code** is selected,	Then you need to activate the compatibility mode **ATV32** in the ATV320.
If the check boxes **Check Major Revision** and / or **Check Minor Revision** are selected,	Then you will probably not be able to replace the device without modifying the EcoStruxure Machine Expert project.

How to Verify Whether the Compatibility Mode ATV32 Must be Activated on Modbus TCP

It is not necessary to activate the compatibility mode **ATV32** in the ATV320 on Modbus TCP.

How to Activate the Compatibility Mode ATV32 in the ATV320

The following paragraphs describe the different ways to activate the compatibility mode **ATV32** in the ATV320:

- Using a Modbus SL client software, page 38.
- Using a CANopen client software, page 38.
- Using the graphical keypad of the ATV320, page 39.

NOTE: It is not possible to activate the compatibility mode **ATV32** by using SoMove or the local keypad.

Activating the Compatibility Mode ATV32 Using a Modbus SL Client Software

Proceed as follows to activate the compatibility mode **ATV32** using a Modbus SL client software:

Step	Action
1	Write the word `d#1` to the parameter *AP17* having the address `d#8817` to the ATV320 device over Modbus SL.
2	Save the modification in EEPROM by writing the word `d#2` to the parameter *CMI* having the address `d#8504`.

NOTE:

- Use `d#0` for *AP17* for the default ATV320 mode.
- Use `d#1` for *AP17* in order to activate the **ATV32** mode.

Activating the Compatibility Mode ATV32 Using a CANopen Client Software

Proceed as follows to activate the compatibility mode **ATV32** using a CANopen client software:

Step	Action
1	Write the word `d#1` to the parameter *AP17* having the address (index:subindex) = `16#203A:16#12` to the ATV320 device over CANopen.
2	Save the modification in EEPROM by writing the value `d#2` to the parameter *CMI* having the address (index:subindex) = `16#2037:16#5`.

NOTE:

- Use `d#0` for *AP17* for the default ATV320 mode.
- Use `d#1` for *AP17* in order to activate the **ATV32** mode.

Activating the Compatibility Mode ATV32 Using the Graphical Keypad of the ATV320

Proceed as follows to activate the compatibility mode **ATV32** using the graphical keypad of the ATV320:

Step	Action
1	Select the entry **2. IDENTIFICATION**.
2	Place the cursor on the **Graphic Display Terminal > <version>**.
3	Push the **ENTER** button for 5 s until the graphic keypad has returned to the menu **2. IDENTIFICATION**.
4	Select the entry **1.3 CONF**.
5	Select the entry **FULL**.
6	Select the entry **HWO** (= MenuHiddenWords).
7	Select the entry **APW** (= MenuApplicativeHiddenWords).
8	Select **Application 17**, and write `d#1`.

NOTE:

- Use `d#0` for **Application 17** for the default ATV320 mode.
- Use `d#1` for **Application 17** in order to activate the **ATV32** mode.

Replacing an Advantys OTB Distributed I/O System by a TM3 Bus Coupler

Hardware Migration

Conversion proposal:

OTB Reference	Input used	Output used	Counter PWM/PLS	Width (mm)	Substitute References	Input	Output	Width (mm)
OTB1E0DM9LP	4	4	0	55	TM3BCEIP + TM3DM8R/G	4	4	51
OTB1E0DM9LP	12	8	0	55	TM3BCEIP + TM3DM24R/G	16	8	66
OTB1S0DM9LP	4	4	0	55	TM3BCSL + TM3DM8R/G	4	4	51
OTB1S0DM9LP	12	8	0	55	TM3BCSL + TM3DM24R/G	16	8	66
OTB1C0DM9LP	4	4	0	55	TM3BCCO + TM3DM8R/G	4	4	51
OTB1C0DM9LP	12	8	0	55	TM3BCCO + TM3DM24R/G	16	8	66
OTB1E0DM9LP	12	8	4	55	TM221M32K	16	16	70
OTB1E0DM9LP	12	8	4	55	TM221M32K	16	16	70
OTB1C0DM9LP	12	8	4	55	TM241CEC24•	14	10	150

Migration Conditions

This table describes the features that can be migrated:

Application type and features	Substitute with TM3 Bus Coupler
OTB using embedded counter	No substitution
OTB using embedded PLS	No substitution

Application type and features	Substitute with TM3 Bus Coupler
OTB using embedded PMW	No substitution
OTB using embedded I/Os	TM3BC + TM3DM24R or TM3DM24R expansion modules
OTB using Remote Fast Counter (RFC)	No substitution
OTB using Remote Very Fast Counter (RVFC)	No substitution
OTB using Remote Pulse Generator Output (RPLS)	No substitution
OTB using Remote Pulse Width Modulator (RPWM)	No substitution

Compatibility Table

Software used	Application Migration to EcoStruxure Machine Expert V2.0	
	Hardware Compatibility	Software Compatibility
SoMachine V4.3	YES	Modify the controller application
EcoStruxure Machine Expert V1.•	YES	Modify the controller application
Unity using Advantys	YES	–
3rd party using Advantys	YES	–

Ethernet: replacing a OTB1E0DM9LP by a TM3BCEIP

	OTB1E0DM9LP	TM3BCEIP
General Features		
Ethernet connector	RJ45	2 RJ45 daisy chain
Bus Speed (Mbps)	10, 100	10, 100
Protocol EIP	Not supported	Supported
Protocol Modbus TCP	Supported	Supported
Plug and Work (Discovery)	Not supported	Supported
Fast Device Replacement (FDR)	Not supported	Supported
Manufacturer zone Modbus Registers		
0 Status of Module inputs	Supported	Not supported
1...99 Status of Module inputs	Supported	Supported
100 Status of Module inputs	Supported	Not supported
101...199 Modules output commands	Supported	Supported
200...599 Modules I/O configuration parameters	Supported	Not supported
600...699 Remote Fast Counter (RFC)	Supported	Not supported
700...799 Remote Very Fast Counter (RVFC)	Supported	Not supported
800...899 Remote pulse generator function (RPLS))	Supported	Not supported
900...999 System diagnostics	Supported	Supports only 900-901, 930-933, 990-991
1000...1049 Managing the island's behavior	Supported	Supports only 1005, 1009
1050...1099 managing the TCP connection	Supported	Supports only 1058-1066
1100...1108 Description of modules constituting the island	Supported	Supported (1)
2507... 2508 TM3 bus coupler product firmware version	Not supported	Supported
2512... 2513 TM3 bus coupler product serial number	Not supported	Supported

	OTB1E0DM9LP	TM3BCEIP
2601 Rotary switch ONES position	Not supported	Supported
2602 Rotary switch TENS position	Not supported	Supported
1 1100 represents the bus coupler product code.		

Serial Line: replacing a OTB1S0DM9LP by a TM3BCSL

	OTB1S0DM9LP	TM3BCSL
General Features		
Serial connector	RJ45	2 RJ45 daisy chain
Bus Speed (bits/s)	1200, 2400, 4800, 9600, 19200, 38400	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Even	Even
Data format	8 bits, 1 stop bit	8 bits, 1 stop bit
Manufacturer zone Modbus Registers		
0 Status of Module inputs	Supported	Not supported
1...99 Status of Module inputs	Supported	Supported
100 Modules output commands	Supported	Supported
101...199 Status of Module inputs	Supported	Supported
200...599 Modules I/O configuration parameters	Supported	Not supported
600...699 Remote Fast Counter (RFC)	Supported	Not supported
700...799 Remote Very Fast Counter (RVFC)	Supported	Not supported
800...899 Remote pulse generator function (RPLS))	Supported	Not supported
900...999 System diagnostics	Supported	Supports only 900-901,930-933
1000...1099 Managing the module behavior	Supported	Supports only 1005, 1009, 1050-1054
1100...1108 Description of modules constituting the island	Supported	Supported

CANopen: replacing a OTB1C0DM9LP by a TM3BCCO

	OTB1C0DM9LP	TM3BCCO
General Features		
CANopen connector	1 D-Sub DB9	2 RJ45 daisy chain
Bus Speed (Kbits/s)	10, 20, 50, 125, 250, 500, 800, 1000	20, 50, 125, 250, 500, 800, 1000
Event Timer timeout	Not supported	Supported
Remote Transmission Request of PDOs	Not supported	Supported
Communication Objects		
1010: Store Parameters	Supported	Not supported
1011: Restore Default Parameters	Supported	Not supported
1029: Error Behavior	Not supported	Supported
1201: Second Server SDO Parameter	Not supported	Supported
1400 & 1600: Receive PDOs (RxPDOs)	Supports up to 8 RxPDOs	Supports up to 29 RxPDOs
1800 & 1A00: Transmit PDOs (TxPDOs)	Supports up to 8 TxPDOs	Supports up to 56 TxPDOs
Manufacturer-specific Objects		

	OTB1C0DM9LP	TM3BCCO
IO Modules configuration	Dedicated Objects for each module configuration	Single Object for all Modules configuration
Analog Modules Diagnostics	Object 3000	Object 2300
Device-specific Objects		
6002: Digital Input 8 bits: polarity	Not supported	Supported
6006: Digital Input 8 bits: interrupt mask	Not supported	Supported
6103: Digital Input 16 bits: Filter mask	Supported	Not supported
6106: Digital Input 16 bits: interrupt mask	Not supported	Supported
6202: Digital Output 8 bits: polarity	Not supported	Supported
6306: Fallback Mode Output 16 bits	Supported	Not supported (fallback is managed via the TM3 configuration)
6307: Fallback Value Output 16 bits	Supported	Not supported (fallback is managed via the TM3 configuration)
6308: Digital Output 16 bits: Filter mask	Supported	Not supported
6443: Analog Output Fallback Mode	Supported	Not supported (fallback is managed via the TM3 configuration)
6307: Analog Output Fallback Value	Supported	Not supported (fallback is managed via the TM3 configuration)

Replacing an OTB1E0DM9LP by a TM3BCEIP from a SoMachine V4.3 project to an EcoStruxure Machine Expert Project

Follow these steps to replace a OTB1E0DM9LP by a TM3BCEIP from a SoMachine V4.3 project to an EcoStruxure Machine Expert Project

Step	Action
1	Open your SoMachine V4.3 project in EcoStruxure Machine Expert V2.0 and click **update**.
2	Select **TM3BCEIP** in the **Hardware Catalog** and drag it to the **Devices tree** under the **Ethernet Network** node.
3	In the **Modbus TCP Slave Configuration** window, select the same Ethernet parameter for **TM3BCEIP** than you have in the **OTB_1E0DM9LP**.
4	Select the **TM3DM24R/G** in the **Hardware Catalog** and drag it to the **Devices tree** under the **TM3BC_EtherNetIP (TM3BCEIP)**.
5	Select the TM2 expansion modules under the **OTB_1E0DM9LP** then right-click and select **Cut**.
6	Select the **TM3BC_EtherNetIP (TM3BCEIP)** in the **Devices tree** and right-click **Paste**. **Result:** The TM2 expansion modules are connected to the **TM3BCEIP**.
7	Open the **OTB_1E0DM9LP Modbus IOScanner I/O Mapping** tab and the **TM3DM24R/G Modbus IOScanner I/O Mapping** tab and copy the **Inputs** variables from the **OTB_1E0DM9LP** to the **TM3DM24R/G**.
8	Copy the **Outputs** variables from the **OTB_1E0DM9LP** to the **TM3DM24R/G**.
9	Select the **OTB_1E0DM9LP** and right-click **Delete**

Unsupported Devices

Unsupported Devices

The table lists the devices that are not supported by the present EcoStruxure Machine Expert version. The second column provides the devices that are

proposed for conversion in the **Devices** tab of the **Update Project** dialog box, page 11. If the second column is empty, no device is available for replacement in the present EcoStruxure Machine Expert version.

Unsupported device	Converted to
TM238LDA24DR	TM241C24R
TM238LDD24DT	TM241C24T/U
TM238LFAC24DR	TM241CEC24R/U
TM238LFDC24DT	TM241CEC24T/U
TM258LD42DT	–
TM258LD42DT4L	–
TM258LF42DT	–
TM258LF42DT4L	–
TM258LF66DT4L	–
TM258LF42DR	–
LMC058LF42	–
LMC058LF424	–
LMC078	–
ATV-IMC	–
Lexium05	–
Lexium23+	–
ATV32	ATV320
ATV31/ATV312	ATV320
ATV71: 220 V and 400 V	ATV340/ATV930, for details see the ATV71 References Substitution List, page 45
ATV71: 690 Vac	ATV930, for details see the ATV71 References Substitution List, page 45
Osicoder	–
OTB1E0DM9LP	TM3BCEIP+TM3DM8R/G TM3BCEIP+TM3DM24R/G TM221ME32TK
OTB1S0DM9LP	TM3BCSL+TM3DM8R/G TM3BCSL+TM3DM24R/G TM221M32K
OTB1C0DM9LP	TM3BCCO+TM3DM8R/G TM3BCCO+TM3DM24R/G TM241CEC24•
FTB	–
ASI Master / ASI Slaves	–
iEM3x50	–
PM1200	–
PM325•	–
PM800	–
Harmony HMISTO••••••• version monochrome	Harmony HMIS5T
Harmony HMIXBTGK••••	Harmony HMIGK••••
HMIG5U Box	–
Harmony HMIXBTGT1••5	Harmony HMIGTO••••
Harmony HMIXBTGT2•••	

Unsupported device	Converted to
Harmony HMIXBTGT4•••	Harmony HMIGTO•••• / Harmony HMIGTU•••• (HMIG3U box)
Harmony HMIXBTGT5•••	
Harmony HMIXBTGT6•••	
Harmony HMIXBTGT7•••	Harmony HMIGTU•••• (HMIG3U box)
HMIBPxxx2/xxx5	HMIBMP
HMIBSO	HMIBMI
HMIBSU	HMIBMO
HMIBUxxx1/xxx•	HMIBMU
HMIGTW5354/PWC5	Harmony HMIGTU•••• (HMIG3U box)
HMIGTW7354x/PWC7/PVC7	
HMIPPx6	HMIBMP
HMIIPPx7/PRx7	
HMIPPx9	
HMIPUx6	HMIBMU
HMIIPUx7/PRx7	HMIBMU/P
HMIPUx9	HMIBMU
HMIBMO	–
HMIBMI	–
HMIBSC	–
XBTGT + control	–
XBTGK + control	–
XBTGC	–

NOTE: The Modicon M221 Logic Controller which was previously supported within SoMachine via SoMachine Basic is not integrated into EcoStruxure Machine Expert.

The **Update Project** procedure may include a conversion of devices as indicated in the list.

The conversion of devices may also have influences on the addressing and the libraries.

To help to avoid unintended behavior after a device was converted:

- Verify that the new device supports all functions and communication ports that are required in your project.
- Avoid using direct addresses in your application.
- Perform a backup of the project to the PC before converting a device:

⚠WARNING

UNINTENDED EQUIPMENT OPERATION

- Verify that any direct addresses used in your application (for example, `%IB5`) have been converted correctly after device conversion.
- Verify that the modified project contains the intended configurations and provides the intended functionality after you have converted the device.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTICE
LOSS OF DATA Perform a backup of the project to the PC before converting a device. **Failure to follow these instructions can result in equipment damage.**

ATV71 References Substitution List

Unsupported Reference	Substitute References	
-	Option 1	Option 2
ATV71H037M3	ATV930U07M3	-
ATV71H037M3383	ATV930U07M3	-
ATV71H037M3460	-	-
ATV71H037M3S337	ATV930U07M3	-
ATV71H037M3Z	ATV930U07M3	-
ATV71H075M3	ATV930U15M3	-
ATV71H075M3383	ATV930U15M3	-
ATV71H075M3460	-	-
ATV71H075M3S337	ATV930U15M3	-
ATV71H075M3Z	ATV930U15M3	-
ATV71H075N4	ATV930U15N4	ATV340U07N4
ATV71H075N4383	ATV930U15N4	ATV340U07N4
ATV71H075N4460	-	-
ATV71H075N4S337	ATV930U15N4	ATV340U07N4
ATV71H075N4Z	ATV340U07N4	ATV930U15N4Z
ATV71H075N4Z460	-	-
ATV71HC11N4	ATV930C13N4C	-
ATV71HC11N4381	-	-
ATV71HC11N4383	ATV930C13N4C	-
ATV71HC11N4D	ATV930C13N4C	-
ATV71HC11Y	ATV9A0C16*6	-
ATV71HC11YT	ATV9A0C16*6	-
ATV71HC13N4	ATV930C16N4C	-
ATV71HC13N4381	-	-
ATV71HC13N4383	ATV9A0C71*4	-
ATV71HC13N4D	ATV930C16N4C	-
ATV71HC13Y	ATV9A0C20*6	-
ATV71HC13YT	ATV9A0C20*6	-
ATV71HC16N4	ATV930C22N4C	ATV930C20N4F
ATV71HC16N4381	-	-
ATV71HC16N4383	ATV930C22N4C	ATV930C20N4F
ATV71HC16N4D	ATV930C22N4C	ATV930C20N4F
ATV71HC16Y	ATV9A0C25*6	-
ATV71HC16YT	ATV9A0C25*6	-
ATV71HC20N4	ATV930C25N4C	ATV930C25N4F
ATV71HC20N4381	-	-
ATV71HC20N4383	ATV930C25N4C	ATV930C25N4F

Unsupported Reference	Substitute References	
ATV71HC20N4D	ATV930C25N4C	ATV930C25N4F
ATV71HC20Y	ATV9A0C31*6	-
ATV71HC20YT	ATV9A0C31*6	-
ATV71HC25N4	ATV930C31N4C	ATV930C31N4F
ATV71HC25N4381	-	-
ATV71HC25N4383	ATV930C31N4C	ATV930C31N4F
ATV71HC25N4D	ATV930C31N4C	ATV930C31N4F
ATV71HC25Y	ATV9A0C40*6	-
ATV71HC25YT	ATV9A0C40*6	-
ATV71HC28N4	ATV9A0C40*4	-
ATV71HC28N4381	-	-
ATV71HC28N4383	ATV9A0C40*4	-
ATV71HC28N4D	ATV9A0C40*4	-
ATV71HC31N4	ATV9A0C45*4	-
ATV71HC31N4381	-	-
ATV71HC31N4383	ATV9A0C45*4	-
ATV71HC31N4D	ATV9A0C45*4	-
ATV71HC31Y	ATV9A0C50*6	-
ATV71HC31YT	ATV9A0C50*6	-
ATV71HC40N4	ATV9A0C56*4	-
ATV71HC40N4381	-	-
ATV71HC40N4383	ATV9A0C56*4	-
ATV71HC40N4D	ATV9A0C56*4	-
ATV71HC40Y	ATV9A0C63*6	-
ATV71HC40YT	ATV9A0C63*6	-
ATV71HC50N4	ATV9A0C71*4	-
ATV71HC50N4381	-	-
ATV71HC50N4383	ATV9A0C71*4	-
ATV71HC50N4D	ATV9A0C71*4	-
ATV71HC50Y	ATV9A0C80*6	-
ATV71HC50YT	ATV9A0C80*6	-
ATV71HC63Y	ATV9A0M10*6	-
ATV71HC63YT	ATV9A0M10*6	-
ATV71HD11M3X	ATV930D15M3	-
ATV71HD11M3X337	ATV930D15M3	-
ATV71HD11M3X383	ATV930D15M3	-
ATV71HD11M3X460	-	-
ATV71HD11M3XZ	ATV930D15M3	-
ATV71HD11N4	ATV930D15N4	ATV340D11N4
ATV71HD11N4383	ATV930D15N4	ATV340D11N4
ATV71HD11N4460	-	-
ATV71HD11N4S337	ATV930D15N4	ATV340D11N4
ATV71HD11N4Z	ATV340D11N4	ATV930D15N4Z
ATV71HD11N4Z305	-	-
ATV71HD11N4Z383	ATV340D11N4	ATV930D15N4Z
ATV71HD11N4Z460	-	-

Unsupported Reference	Substitute References	
ATV71HD11Y	ATV930D15Y6	-
ATV71HD15M3X	ATV930D18M3	-
ATV71HD15M3X337	ATV930D18M3	-
ATV71HD15M3X383	ATV930D18M3	-
ATV71HD15M3X460	-	-
ATV71HD15M3XZ	ATV930D18M3	-
ATV71HD15N4	ATV930D18N4	ATV340D15N4
ATV71HD15N4383	ATV930D18N4	ATV340D15N4
ATV71HD15N4460	-	-
ATV71HD15N4S337	ATV930D18N4	ATV340D15N4
ATV71HD15N4Z	ATV340D15N4	ATV930D18N4Z
ATV71HD15N4Z305	-	-
ATV71HD15N4Z383	ATV340D15N4	ATV930D18N4Z
ATV71HD15N4Z460	-	-
ATV71HD15Y	ATV930D18Y6	-
ATV71HD18M3X	ATV930D22M3	-
ATV71HD18M3X337	ATV930D22M3	-
ATV71HD18M3X383	ATV930D22M3	-
ATV71HD18M3X460	-	-
ATV71HD18N4	ATV930D22N4	ATV340D18N4
ATV71HD18N4383	ATV930D22N4	ATV340D18N4
ATV71HD18N4460	-	-
ATV71HD18N4S337	ATV930D22N4	ATV340D18N4
ATV71HD18N4Z	ATV340D18N4	ATV930D22N4Z
ATV71HD18N4Z304	-	-
ATV71HD18N4Z305	-	-
ATV71HD18N4Z383	ATV340D18N4	ATV930D22N4Z
ATV71HD18N4Z460	-	-
ATV71HD18Y	ATV930D22Y6	-
ATV71HD22M3X	ATV930D30M3	-
ATV71HD22M3X337	ATV930D30M3	-
ATV71HD22M3X383	ATV930D30M3	-
ATV71HD22M3X460	-	-
ATV71HD22N4	ATV930D30N4	ATV340D22N4
ATV71HD22N4383	ATV930D30N4	ATV340D22N4
ATV71HD22N4460	-	-
ATV71HD22N4S337	ATV930D30N4	ATV340D22N4
ATV71HD22N4Z	ATV340D22N4	ATV930D30N4Z
ATV71HD22N4Z305	-	-
ATV71HD22N4Z383	ATV340D22N4	ATV930D30N4Z
ATV71HD22N4Z460	-	-
ATV71HD22Y	ATV930D30Y6	-
ATV71HD30M3X	ATV930D37M3	-
ATV71HD30M3X337	ATV930D37M3	-
ATV71HD30M3X383	ATV930D37M3	-
ATV71HD30M3X460	-	-

Unsupported Reference	Substitute References	
ATV71HD30N4	ATV930D37N4	ATV340D30N4E
ATV71HD30N4383	ATV930D37N4	ATV340D30N4E
ATV71HD30N4460	-	-
ATV71HD30N4S337	ATV930D37N4	ATV340D30N4E
ATV71HD30N4Z	ATV340D30N4E	ATV930D37N4Z
ATV71HD30N4Z305	-	-
ATV71HD30N4Z383	ATV340D30N4E	ATV930D37N4Z
ATV71HD30N4Z460	-	-
ATV71HD30Y	ATV930D37Y6	-
ATV71HD37M3X	ATV930D45M3	-
ATV71HD37M3X337	ATV930D45M3	-
ATV71HD37M3X383	ATV930D45M3	-
ATV71HD37M3X460	-	-
ATV71HD37N4	ATV930D45N4	ATV340D37N4E
ATV71HD37N4383	ATV930D45N4	ATV340D37N4E
ATV71HD37N4460	-	-
ATV71HD37N4S337	ATV930D45N4	ATV340D37N4E
ATV71HD37N4Z	ATV340D37N4E	ATV930D45N4Z
ATV71HD37N4Z305	-	-
ATV71HD37N4Z383	ATV340D37N4E	ATV930D45N4Z
ATV71HD37N4Z460	-	-
ATV71HD37Y	ATV930D45Y6	-
ATV71HD45M3X	ATV930D55M3	-
ATV71HD45M3X337	ATV930D55M3	-
ATV71HD45M3X383	ATV930D55M3	-
ATV71HD45N4	ATV930D55N4	ATV340D45N4E
ATV71HD45N4383	ATV930D55N4	ATV340D45N4E
ATV71HD45N4S337	ATV930D55N4	ATV340D45N4E
ATV71HD45N4Z	ATV340D45N4E	ATV930D55N4Z
ATV71HD45N4Z383	ATV340D45N4E	ATV930D55N4Z
ATV71HD45Y	ATV930D55Y6	-
ATV71HD55M3X	ATV930D75M3	-
ATV71HD55M3X383	ATV930D75M3	-
ATV71HD55M3XD	ATV930D75M3	-
ATV71HD55N4	ATV930D75N4	ATV340D55N4E
ATV71HD55N4383	ATV930D75N4	ATV340D55N4E
ATV71HD55N4S337	ATV930D75N4	ATV340D55N4E
ATV71HD55N4Z	ATV340D55N4E	ATV930D75N4Z
ATV71HD55N4Z383	ATV340D55N4E	ATV930D75N4Z
ATV71HD55Y	ATV930D75Y6	-
ATV71HD75M3X	ATV930D75M3	-
ATV71HD75M3X383	ATV930D75M3	-
ATV71HD75M3XD	ATV930D75M3	-
ATV71HD75N4	ATV930D90N4	ATV340D75N4E
ATV71HD75N4383	ATV930D90N4	ATV340D75N4E
ATV71HD75N4S337	ATV930D90N4	ATV340D75N4E

Unsupported Reference	Substitute References	
ATV71HD75N4Z	ATV340D75N4E	ATV930D90N4Z
ATV71HD75N4Z383	ATV340D75N4E	ATV930D90N4Z
ATV71HD75Y	ATV930D90Y6	-
ATV71HD90N4	ATV930C11N4C	-
ATV71HD90N4381	-	-
ATV71HD90N4383	ATV930C11N4C	-
ATV71HD90N4D	ATV930C11N4C	-
ATV71HD90Y	ATV9A0C13*6	-
ATV71HU15M3	ATV930U22M3	-
ATV71HU15M3383	ATV930U22M3	-
ATV71HU15M3460	-	-
ATV71HU15M3S337	ATV930U22M3	-
ATV71HU15M3Z	ATV930U22M3	-
ATV71HU15N4	ATV930U22N4	ATV340U15N4
ATV71HU15N4383	ATV930U22N4	ATV340U15N4
ATV71HU15N4460	-	-
ATV71HU15N4S337	ATV930U22N4	ATV340U15N4
ATV71HU15N4Z	ATV340U15N4	ATV930U22N4Z
ATV71HU15N4Z460	-	-
ATV71HU15S6X	ATV930U22S6X	-
ATV71HU22M3	ATV930U30M3	-
ATV71HU22M3383	ATV930U30M3	-
ATV71HU22M3460	-	-
ATV71HU22M3S337	ATV930U30M3	-
ATV71HU22M3Z	ATV930U30M3	-
ATV71HU22N4	ATV930U30N4	ATV340U22N4
ATV71HU22N4383	ATV930U30N4	ATV340U22N4
ATV71HU22N4460	-	-
ATV71HU22N4S337	ATV930U30N4	ATV340U22N4
ATV71HU22N4Z	ATV340U22N4	ATV930U30N4Z
ATV71HU22N4Z383	ATV340U22N4	ATV930U30N4Z
ATV71HU22N4Z460	-	-
ATV71HU22S6X	ATV930U30S6X	-
ATV71HU22Y	ATV930U30Y6	-
ATV71HU30M3	ATV930U40M3	-
ATV71HU30M3383	ATV930U40M3	-
ATV71HU30M3460	-	-
ATV71HU30M3S337	ATV930U40M3	-
ATV71HU30M3Z	ATV930U40M3	-
ATV71HU30N4	ATV930U40N4	ATV340U30N4
ATV71HU30N4383	ATV930U40N4	ATV340U30N4
ATV71HU30N4460	-	-
ATV71HU30N4S337	ATV930U40N4	ATV340U30N4
ATV71HU30N4Z	ATV340U30N4	ATV930U40N4Z
ATV71HU30N4Z383	ATV340U30N4	ATV930U40N4Z
ATV71HU30N4Z460	-	-

Unsupported Reference	Substitute References	
ATV71HU30S6X	ATV930U40S6X	-
ATV71HU30Y	ATV930U40Y6	-
ATV71HU40M3	ATV930U55M3	-
ATV71HU40M3383	ATV930U55M3	-
ATV71HU40M3460	-	-
ATV71HU40M3S337	ATV930U55M3	-
ATV71HU40M3Z	ATV930U55M3	-
ATV71HU40N4	ATV930U55N4	ATV340U40N4
ATV71HU40N4383	ATV930U55N4	ATV340U40N4
ATV71HU40N4460	-	-
ATV71HU40N4S337	ATV930U55N4	ATV340U40N4
ATV71HU40N4Z	ATV340U40N4	ATV930U55N4Z
ATV71HU40N4Z305	-	-
ATV71HU40N4Z383	ATV340U40N4	ATV930U55N4Z
ATV71HU40N4Z460	-	-
ATV71HU40S6X	ATV930U55S6X	-
ATV71HU40Y	ATV930U55Y6	-
ATV71HU55M3	ATV930U75M3	-
ATV71HU55M3383	ATV930U75M3	-
ATV71HU55M3460	-	-
ATV71HU55M3S337	ATV930U75M3	-
ATV71HU55M3Z	ATV930U75M3	-
ATV71HU55N4	ATV930U75N4	ATV340U55N4
ATV71HU55N4383	ATV930U75N4	ATV340U55N4
ATV71HU55N4460	-	-
ATV71HU55N4S337	ATV930U75N4	ATV340U55N4
ATV71HU55N4Z	ATV340U55N4	ATV930U75N4Z
ATV71HU55N4Z305	-	-
ATV71HU55N4Z383	ATV340U55N4	ATV930U75N4Z
ATV71HU55N4Z460	-	-
ATV71HU55S6X	ATV930U75S6X	-
ATV71HU55Y	ATV930U75Y6	-
ATV71HU75M3	ATV930D11M3	-
ATV71HU75M3383	ATV930D11M3	-
ATV71HU75M3460	-	-
ATV71HU75M3S337	ATV930D11M3	-
ATV71HU75M3Z	ATV930D11M3	-
ATV71HU75N4	ATV930D11N4	ATV340U75N4
ATV71HU75N4383	ATV930D11N4	ATV340U75N4
ATV71HU75N4460	-	-
ATV71HU75N4S337	ATV930D11N4	ATV340U75N4
ATV71HU75N4Z	ATV340U75N4	ATV930D11N4Z
ATV71HU75N4Z305	-	-
ATV71HU75N4Z383	ATV340U75N4	ATV930D11N4Z
ATV71HU75N4Z460	-	-
ATV71HU75S6X	ATV930D11S6X	-

Unsupported Reference	Substitute References	
ATV71HU75Y	ATV930D11Y6	-
ATV71LD11M3XZ	ATV71LD54M3Z	-
ATV71LD11N4Z	ATV71LD27N4Z	-
ATV71LD15M3XZ	ATV71LD66M3Z	-
ATV71LD15N4Z	ATV71LD33N4Z	-
ATV71LD18M3XZ	-	-
ATV71LD18N4Z	-	-
ATV71LD22M3XZ	-	-
ATV71LD22N4Z	ATV71LD48N4Z	-
ATV71LD30M3XZ	-	-
ATV71LD30N4Z	-	-
ATV71LD37M3XZ	-	-
ATV71LD37N4Z	-	-
ATV71LD45M3XZ	-	-
ATV71LD45N4Z	-	-
ATV71LD55N4Z	-	-
ATV71LD75N4Z	-	-
ATV71LU22M3Z	-	-
ATV71LU30M3Z	-	-
ATV71LU30N4Z	-	-
ATV71LU40M3Z	-	-
ATV71LU40N4Z	ATV71LD10N4Z	-
ATV71LU55M3Z	ATV71LD27M3Z	-
ATV71LU55N4Z	ATV71LD14N4Z	-
ATV71LU75M3Z	ATV71LD33M3Z	-
ATV71LU75N4Z	ATV71LD17N4Z	-
ATV71P075N4Z	-	-
ATV71PD11N4Z	-	-
ATV71PU15N4Z	-	-
ATV71PU22N4Z	-	-
ATV71PU30N4Z	-	-
ATV71PU40N4Z	-	-
ATV71PU55N4Z	-	-
ATV71PU75N4Z	-	-
ATV71W075N4	ATV950U07N4	ATV950U15N4
ATV71WD11N4	ATV950D11N4	ATV950D15N4
ATV71WD15N4	ATV950D15N4	ATV950D18N4
ATV71WD18N4	ATV950D18N4	ATV950D22N4
ATV71WD22N4	ATV950D22N4	ATV950D30N4
ATV71WD30N4	ATV950D30N4	ATV950D37N4
ATV71WD37N4	ATV950D37N4	ATV950D45N4
ATV71WD45N4	ATV950D45N4	ATV950D55N4
ATV71WD55N4	ATV950D55N4	ATV950D75N4
ATV71WD75N4	ATV950D75N4	ATV950D90N4
ATV71WU15N4	ATV950U15N4	ATV950U22N4
ATV71WU22N4	ATV950U22N4	ATV950U30N4

Unsupported Reference	Substitute References	
ATV71WU30N4	ATV950U30N4	ATV950U40N4
ATV71WU40N4	ATV950U40N4	ATV950U55N4
ATV71WU55N4	ATV950U55N4	ATV950U75N4
ATV71WU75N4	ATV950U75N4	ATV950D11N4

Obsolete Libraries

Obsolete Libraries

The table lists the libraries that have become obsolete, i.e. that are no longer supported by the present EcoStruxure Machine Expert version. The second column provides the libraries available in the present EcoStruxure Machine Expert version.

NOTE: The libraries that are listed in the second column are not fully compatible with the obsolete libraries of the first column. When you update your project from SoMachine / SoMachine Motion to EcoStruxure Machine Expert, you must integrate the new libraries and adapt your application code manually.

Obsolete library	Present library
Altivar	GMC IndependentMotion PLCopenMC GMC IndependentMotion Altivar
CANmotion Lexium	–
EnergyEfficiencyToolbox	–
FieldBusDevicesBase	GMC IndependentMotion Base
FieldBusDevicesItf	GMC IndependentMotion Interface
FieldBusDevicesModbusTCP	GMC IndependentMotion ModbusTCP
FieldBusDevicesPLCopen	GMC IndependentMotion PLCopenMC
Integrated Lexium	GMC IndependentMotion PLCopenMC GMC IndependentMotion Lexium
Lexium	GMC IndependentMotion PLCopenMC GMC IndependentMotion Lexium
Lexium 23	Lexium 28
Lexium 32i	GMC IndependentMotion PLCopenMC GMC IndependentMotion Lexium
MachineEnergyDashboard	–
ModbusEnergyEfficiencyToolbox	–
Packaging	–
PD_PacDriveLib_obsolete	PD_PacDriveLib
PD_Template_obsolete	PD_Template
PD_FieldBusDevices_obsolete	–
PD_ModBus_obsolete	–
PD_ModbusTCPIP_obsolete	ModbusHandling
PD_MultiBelt_obsolete	PD_MultiBelt
PD_Isa_obsolete	PackML
PD_Robotic_obsolete	Robotic

Obsolete library	Present library
PD_SmartInfeed_obsolete	PD_SmartInfeed
PD_Unwinder_obsolete	Unwinder
PD_PacDriveLibModules_obsolete	AxisModule
PD_IsaForTemplate_obsolete	–
PD_EasyTCP_UDP_obsolete	TcpUdpCommunication
PD_FieldBusDeviceModules_obsolete	–
PD_MultiBeltModule_obsolete	PD_MultiBeltModule
PD_RoboticModule_obsolete	RoboticModule
PD_SmartInfeedModule_obsolete	PD_SmartInfeedModule
PD_UnWinderModule_obsolete	UnWinderModule
PreventaSupport	XpsuSupport
Sercos3EnergyEfficiencyToolbox	–

NOTE: PD_•••_obsolete libraries are not supported by EcoStruxure Machine Expert.

Glossary

D

DUT:

(*data unit type*) Along with the standard data types the user can define own data type structures, enumerationen types, and references as data type units in a DUT editor.

E

EDS:

(*electronic data sheet*) A file for fieldbus device description that contains, for example, the properties of a device such as parameters and settings.

F

FDR:

(*fast device replacement*) A service supported by the device, that facilitate the replacement of an inoperable equipment.

G

GVL:

(*global variable list*) Manages global variables within an EcoStruxure Machine Expert project.

L

legacy projects:

Application projects that were created with SoMachine, SoMachine Motion, or a previous version of EcoStruxure Machine Expert.

P

POU:

(*program organization unit*) A variable declaration in source code and a corresponding instruction set. POUs facilitate the modular re-use of software programs, functions, and function blocks. Once declared, POUs are available to one another.

R

RPI:

(*requested packet interval)* The time period between cyclic data exchanges requested by the scanner. EtherNet/IP devices publish data at the rate specified by the RPI assigned to them by the scanner, and they receive message requests from the scanner with a period equal to RPI.

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EIO0000002842.04