

EcoStruxure™ Control Expert Installation Manual

(Original Document)

12/2018

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

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Safety Information



Important Information

NOTICE

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.

BEFORE YOU BEGIN

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

WARNING

UNGUARDED EQUIPMENT

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

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

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only you, the user, machine builder or system integrator can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine and, therefore, can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, you should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

NOTE: Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

START-UP AND TEST

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check be made and that enough time is allowed to perform complete and satisfactory testing.

WARNING

EQUIPMENT OPERATION HAZARD

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

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

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

Software testing must be done in both simulated and real environments.

Verify that the completed system is free from all short circuits and temporary grounds that are not installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove all temporary grounds from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

OPERATION AND ADJUSTMENTS

The following precautions are from the NEMA Standards Publication ICS 7.1-1995 (English version prevails):

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments actually required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

About the Book



At a Glance

Document Scope

This document describes the installation and update of Control Expert software. Installation of the different tools (converter, communication drivers, ...) is explained in the different items contained in the online-help documentation.

Validity Note

This documentation is valid for EcoStruxure™ Control Expert 14.0 or later.

Related Documents

Title of documentation	Reference number
Schneider Electric License Manager, User Manual	EIO0000001070 (English), EIO0000001071 (French), EIO0000001072 (German), EIO0000001074 (Spanish), EIO0000001073 (Italian), EIO0000001075 (Chinese)
Schneider Electric Floating License Manager, User Manual	EIO0000001078 (English), EIO0000001079 (French), EIO0000001080 (German), EIO0000001082 (Spanish), EIO0000001081 (Italian), EIO0000001083 (Chinese)
EcoStruxure™ Control Expert, Operating Modes	33003101 (English), 33003102 (French), 33003103 (German), 33003104 (Spanish), 33003696 (Italian), 33003697 (Chinese)
EcoStruxure™ Control Expert, Program Languages and Structure, Reference Manual	35006144 (English), 35006145 (French), 35006146 (German), 35013361 (Italian), 35006147 (Spanish), 35013362 (Chinese)
EcoStruxure™ Control Expert, Control, Block Library	33002535 (English), 33002536 (French), 33002537 (German), 33003686 (Italian), 33002538 (Spanish), 33003687 (Chinese)
Communication Drivers, Installation Manual	35006152 (English), 35006153 (French), 35006154 (German), 35013950 (Italian), 35006155 (Spanish), 35012192 (Chinese)

You can download these technical publications and other technical information from our website at www.schneider-electric.com/en/download.

Chapter 1

General Points

Subject of this Chapter

This chapter describes the contents of the software packages, the main characteristics of software installation, the system configuration requirements needed to execute Control Expert software, and the recommended precautions to take when installing or updating Control Expert.

What Is in This Chapter?

This chapter contains the following topics:

Topic	Page
Presentation of Control Expert Software	12
Recommended Precautions when Installing or Updating Control Expert	14
Terminal Configuration	15

Presentation of Control Expert Software

General Points

Control Expert can be installed using the DVD-ROM or .iso file downloaded from web.

Languages

The following languages are available for Control Expert:

- English
- French
- German
- Spanish
- Italian
- Chinese

NOTE: To modify the language of Control Expert selection command:

Start → Programs → EcoStruxture Control Expert → Language Selection.

Software Packages and Licenses

There is one Control Expert installation setup (.iso file) and the license determines the package that can be launched.

The following software licenses are available:

- Control Expert S
- Control Expert L
- Control Expert XL
- Control Expert XL with M580 Safety

NOTE: For Control Expert L and XL packages, adding the M580 Safety CPUs is possible with a **M580 Safety Add-On** license.

Two types of licenses are available to activate Control Expert:

- Node-locked license for use on a local PC. A node-locked license is used on the PC where Control Expert is installed.
- Floating license for multiple uses of an authorized number of PCs in a network connected to the Enterprise License Server.

Activation

Control Expert software comes with a 30-day trial license.

When the first installation is complete, the trial license is automatically activated during first launch of the software product.

The trial license includes the maximum set of software product features which corresponds to the Control Expert XL package with M580 Safety Add-On.

At any time during the trial period or after the trial period you can activate your license.

NOTE: When license is activated, the trial version is no more usable.

If you do not activate your license, Control Expert software no longer runs after the trial period has expired.

Registration

You can register your Control Expert license, at any time on the Schneider Electric Software Licensing Web Portal.

NOTE: Registration is not mandatory and can be done even if the license has not yet been activated.

The registration of the license on the Schneider Electric Software Licensing Web Portal allows you to:

- View all your licenses and their status.
- Increase number of authorized transfer of licenses between PCs.

Recommended Precautions when Installing or Updating Control Expert

Recommended Precautions before Installation

The following table shows the recommended precautions before installing or updating Control Expert:

Step	Action
1	Check the system requirements (<i>see page 15</i>) of the workstation.
2	Check that the Windows session used to install or update Control Expert has administrator rights.
3	Perform a back-up (<i>see page 33</i>) of all current applications and settings before updating Control Expert.
4	Check that the latest Windows Service Pack is installed.
5	Check that the latest Windows Security patches are installed.
6	Disable all the antivirus services (real time, scripting, etc.).
7	Check that the language required with Control Expert is available with Windows, for example, Chinese language for Windows operating system.
8	Close all running applications, (including the current version Control Expert when updating).

Terminal Configuration

Definition

The configuration type determines the level of expected performance.

Performance of Control Expert software can be affected by simultaneously opening several windows, accessing large quantities of animated data or using a large application.

Required Operating System

Control Expert software requires one of the following operating systems to be present on the terminal:

- Microsoft Windows 7 Professional edition 32/64 bits SP1
- Microsoft Windows 10 32/64 bits
- Microsoft Windows Server 2016

NOTE: An operating system Windows 64 bits is mandatory for projects with Modicon M580 controller, or projects using DTMs.

Other Requirements

The following are required before installing Control Expert:

- Internet Explorer V6.0 or later
- Windows Installer V4.5 or later

Terminal Configuration with Windows 7 or Windows 10

The following table provides the minimum and recommended terminal characteristics necessary to install Control Expert software with Windows 7 Professional Edition 32/64 bits SP1 or Windows 10 32/64 bits:

Minimum and recommended terminal configuration	
System	Pentium processor 2.4 GHz or higher; recommended: 3.0 GHz.
RAM	4 GB; recommended: 8 GB (*).
Hard disk space	8 GB including the memory space for the software installation, temporary space for execution and space for saving applications; recommended: 20 GB.
Operating Systems	• Microsoft Windows 7 Professional edition 32/64 bits system with Service Pack 1 (SP1), or • Microsoft Windows 10 32/64 bits system. NOTE: Windows 64 bits is mandatory for projects with Modicon M580 controller, or projects using DTMs.
Drive	DVD R, a DVD RW is recommended.
Display	SVGA 1024x768 or higher resolution monitor with high color 24 bits.
*: A different configuration may be required if other software is used simultaneously with Control Expert.	

Minimum and recommended terminal configuration	
Peripherals	A Microsoft mouse or compatible pointing device.
Web Access	As preferred solution, Web registration requires Internet access.
Other	USB port on the computer.
*: A different configuration may be required if other software is used simultaneously with Control Expert.	

Control Expert on Windows 10

Installation procedure on Windows 10 is provided in **Readme.html** file (**System requirements → System with Microsoft Windows 10 32/64bits**) on Control Expert DVD.

Control Expert on Windows Server 2016

On Windows Server 2016, Control Expert runs without restriction.

Control Expert in a Virtual Machine

Control Expert runs on the following virtual machines:

- VirtualBox
- VMWare

NOTE: It is not recommended to run Control Expert on Windows 8.1 operating system running on VMWare.

Chapter 2

Installing Control Expert for the First Time

Subject of this Chapter

This chapter presents the first time installation of Control Expert software.

NOTE: In case of Unity Pro version already installed on the computer, refer to chapter *Updating Unity Pro with Control Expert* ([see page 31](#)) for specific operations prior and after Control Expert installation procedure.

What Is in This Chapter?

This chapter contains the following topics:

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Automatic Installation	21
How to Activate a Node-locked License	22
How to Activate a Floating License	24
Control Expert License Registration	29

How to Perform a First Installation of Control Expert

Introduction

The procedure for a first-time installation involves installing Control Expert without searching for a Unity Pro or Control Expert version already installed on the computer.

User Rights

To install the Control Expert software, you must have the **administrator privileges** on the workstation.

NOTE: Control Expert is always installed so that it is available for all the users of the workstation.

Components Installed

The following **Control Expert components** are installed:

- PL7 convertor utility
 - Concept convertor utility
 - PLC Simulator
 - OS Loader
 - All DTMs associated to controllers and modules available in Control Expert Hardware Catalog Manager
 - Schneider Electric Software Update
- NOTE:** During installation, enable Schneider Electric Software Update tool to check for updates in order to benefit from Hotfix releases.
- Optional drivers
 - License manager

Default Directories

The default destination directory of the Control Expert software installation is set as follows:

- **For a 32 bits Windows operating system:**
C:\Program Files\Schneider Electric\Control Expert\
 - **For a 64 bits Windows operating system:**
C:\Program Files (x86)\Schneider Electric\Control Expert\

The custom libraries destination directory is set by default to:

C:\ProgramData\Schneider Electric\Control Expert\CustomLibset\Vx.y, where Vx.y corresponds to the version of Control Expert.

Installation Procedure

Execute the following steps to install the Control Expert software package:

Step	Action
1	Make sure that your system meets the minimum configuration requirements (<i>see page 15</i>) to install and run Control Expert.
2	Make sure that you are connected as an administrator of the workstation.
3	The beginning of the installation procedure depends on the software package media: with DVD-ROM: Insert the DVD-ROM named Control Expert . The software package setup is automatically launched. If not, go to the DVD root and launch setup.exe . with .iso file: Extract the files of the installation package to disk or mount the image (.iso). Double-click the setup.exe file located in the root of the installation package. Result: The installation procedure starts.
4	Select the language for the installation from the drop-down list and confirm by clicking OK . NOTE: The selected language is used for the Control Expert installation and execution.
5	When Next is available, click it to confirm the Welcome screen.
6	After reading the compatibility information on the ReadMe and ReleaseNotes dialog (and the other information if you want to), click Next to continue.
7	Read the software license, confirm that you agree by checking the "I accept the terms in the license agreements" box and click Next to continue.
8	You can choose an alternative path for the installation directory and the SESU (Schneider Electric Software Update) tool and/or click Next to continue.
9	You can choose to install or not the communication drivers and click Next to continue.
10	Select the shortcuts needed and click Next to continue.
11	To begin the installation, click Install .
12	When the installation process is complete, you can select Open release notes and/or Start Control Expert after quitting the installation by clicking Finish .

Installation Diagnostic Considerations

NOTE: For Chinese installation, the installation path must not contain Chinese characters.

To configure the installation directory manually, follow this procedure:

Step	Action
1	Right-click My Computer → Properties .
3	Select the Advanced tab.
4	Click Environment Variables button.

Step	Action
5	Add a new path in the User Variables. NOTE: The path by default when Control Expert is installed is: C:\Program Files\Schneider Electric\Control Expert\ for a Windows 32 bits operating system, and C:\Program Files (x86)\Schneider Electric\Control Expert\ for a Windows 64 bits operating system.

Automatic Installation

At a Glance

Automatic installation of Control Expert requires no action during the installation. The installation performed is the same as a default installation in the manual mode. It is carried out with the provided `install.bat` batch command file. This file is at the root of the Control Expert DVD-ROM or in the installation package (.iso file).

To be able to perform an automatic installation:

- manually update the `install.bat` file in a text editor
- launch the automatic installation process by executing the personalized `install.bat` file

Modifying the Command File

The following table describes the procedure for modifying the command file and launching the automatic installation:

Step	Action
1	Select the file <code>install.bat</code> from the Control Expert installation DVD-ROM or from the extracted files of the installation package (.iso file).
2	Right click to display the contextual menu and select Edit. Result: The file opens in text format.
3	Fill in the parameters. The <code>install.bat</code> file is self-documented. It contains an up-to-date description and possible parameter values.
4	Save the file.
5	Double click on the modified file. Result: The installation starts and windows appear with the progress of the installation process.

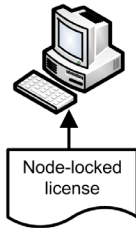
How to Activate a Node-locked License

Overview

The node-locked license needs to be activated within 30 days after software installation.

The license is activated on the local PC where Control Expert is already installed:

Local PC with:
- **Control Expert**
- **License Manager**



Required Information

Required to activate a license, you receive the **Activation ID** either:

- Printed and sent in an envelope, or
- Sent via email.

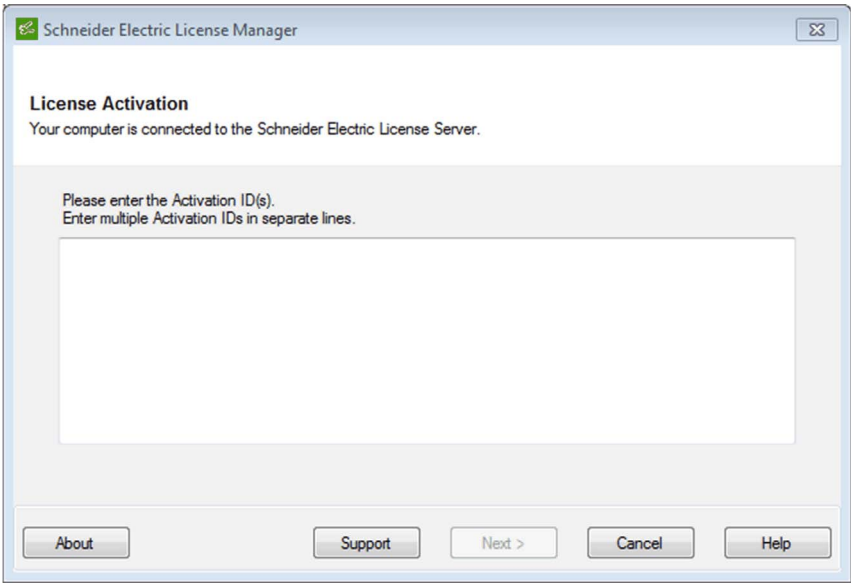
Activation ID example:

Information for Software Activation	
Activation ID:	A - BSCK – CDP9 – F7TS
Type :	Single ; L Permanent
Part number / Reference produit :	CEXSPUCZLSPMZZ
Product / Produit :	EcoStruxure Control Expert V14.0
	
	

Node-locked License Activation Procedure

This procedure describes the steps for activating a node-locked license on the computer where Control Expert is already installed:

Step	Action
1	Start License Manager tool.
2	Select Activate .

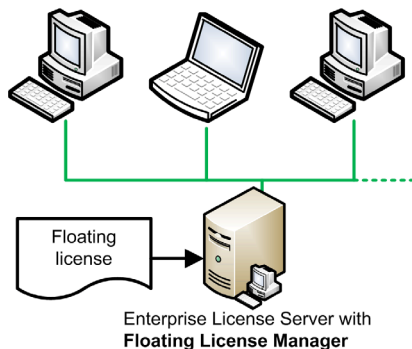
Step	Action
3	The following window appears if you have a valid Internet connection:  NOTE: If your computer has no Internet connection, or is not connected to the Schneider Electric License Server you can activate by email, by phone, or smartphone. For detailed information, refer to <i>Schneider Electric License Manager, User Manual</i> or License Manager on-line help.
4	Prompt your Activation ID and click Next. After few seconds, the successfully created license message appears
5	Click Finish Control Expert is now activated on the computer.
6	Close License Manager tool.

How to Activate a Floating License

Overview

The floating license is activated on the Enterprise License Server:

PCs in a network with: - **Control Expert**
- **License Manager**



Required Information

Required to activate a floating license, you receive the **Activation ID** either:

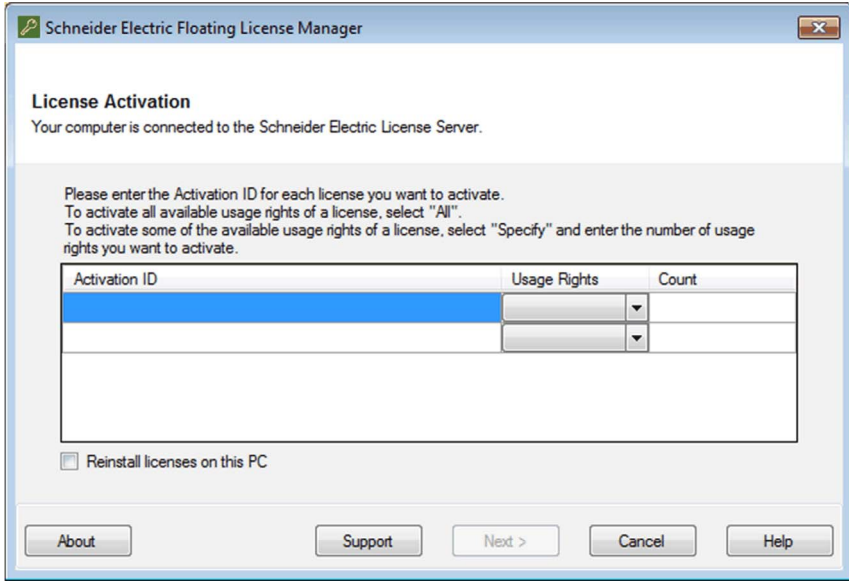
- Printed and sent in an envelope, or
- Sent via email.

Activation ID example:

Information for Software Activation	
Activation ID:	A - 6928 – CRW3 – J7NP
Type :	Floating ; Group ; XL Permanent
Part number/ Reference produit :	CEXSPUCZXGPTZZ
Product/ Produit :	EcoStruxure Control Expert V14.0
	
	

Floating License Activation Procedure

This procedure describes the steps for activating a floating license on the Enterprise License Server:

Step	Action
1	Start Floating License Manager tool. NOTE: If not already installed on the Enterprise License Server, the Floating License Manager installation package is available in Control Expert installation package (.iso) in the FloatingLicenseManager folder.
2	Select Activate .
3	The following window appears if you have a valid Internet connection:  NOTE: If your computer has no Internet connection, or is not connected to the Schneider Electric License Server you can activate by email, by phone, or smartphone. For detailed information, refer to <i>Schneider Electric Floating License Manager, User Manual</i> or Floating License Manager on-line help.
4	Prompt your Activation ID, set Usage Rights and click Next. After few seconds, the successfully created license message appears
5	Click Finish The floating license is now activated on the Enterprise License Server.
6	Close Floating License Manager tool.

Floating License Usage

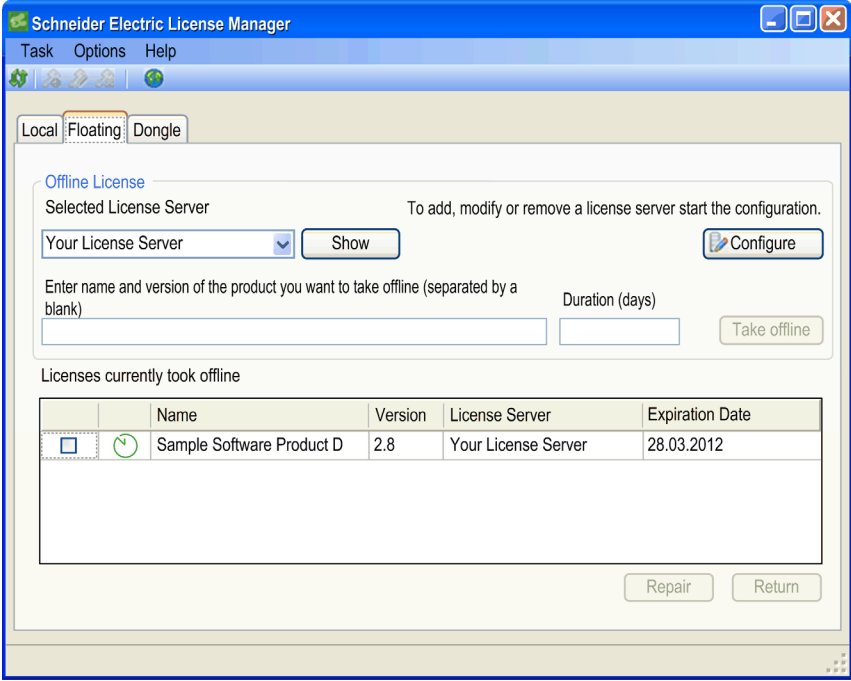
Once activated, the floating license can be used from any computer connected to the same network as the Enterprise License Server.

When used on a computer, the floating license is checked out from the Enterprise License Server and is not available for any other connected computer from this moment. After usage the floating license is checked in again and is available for other connected computers again.

NOTE: The license can be taken offline from Enterprise License Server to a computer. It then behaves as a node-locked license, and the computer can be disconnected from the Enterprise License Server network.

Connecting to the Enterprise License Server

Step	Action
1	Start License Manager tool.
2	Select the Floating tab.

Step	Action
3	The following window appears:  Select your Enterprise License Server in the Selected License Server drop list and click Show. NOTE: If the connection to the Enterprise License Server is not yet configured, click Configure. For detailed information on Enterprise License Server configuration procedure, refer to <i>Schneider Electric License Manager, User Manual</i> or License Manager on-line help.

Taking Offline a Floating License

Step	Action
1	In the Floating tab of the License Manager tool, select your Enterprise License Server.
2	Click Show . Result: An Internet browser opens with the web portal of the FLEXnet License Administrator.
3	In the FLEXnet License Administrator click Activatable to display the available floating licenses. From the list copy, the name and the version of the product to be taken offline.
4	Go back to the Floating tab of the License Manager and enter name and version (separated by a blank) in the text box for requested information.

Step	Action
5	Enter Duration (Days) form 1 day to unlimited (1 000 000). NOTE: Duration is the time period you want to take offline the license from the Enterprise License Server to your local PC.
6	Click Take offline . Result: The license is added to the list of Licenses currently took offline .
7	After time period expires, the license is automatically returned to the Enterprise License Server. If you want to return the license back to the Enterprise License Server before the end of the time period set above: 1 Go back to the Floating tab of the License Manager . 2 In the list of Licenses currently took offline select the license you want to return. 3 Click Return .

Control Expert License Registration

Overview

Registration is done on Schneider Electric Software Licensing Web Portal (SLP).

The SLP is a cloud-based service of Schneider Electric that provides universal access to your Schneider Electric Software licenses on the web. The SLP allows you to overview and manage your licenses and registrations.

NOTE: before registering a license, you have to create your SLP account if not already done.

Creating your SLP Account

Step	Action
1	Go to www.schneider-electric.com/licensing , or click on the globe icon  on the License Manager / Floating License Manager tool.
2	Select Create new Schneider Electric Web User Account .
3	Enter your email address that will be your user ID for your SLP account. Fill in the mandatory fields and validate.

Registering a License

Step	Action
1	Login to the Schneider Electric Software Licensing Web Portal (SLP).
2	Select Register license into my account .
3	Enter the Activation ID for your license and click Register . NOTE: If your license is yet registered, a message will inform you.

Chapter 3

Updating Unity Pro With Control Expert

Subject of this Chapter

This chapter describes how to update a Unity Pro version with Control Expert.
It explains how to perform a back-up of the user applications, settings, custom libraries, private ASI Catalog and also deals with the recommendations related to previous versions of Unity Pro.

What Is in This Chapter?

This chapter contains the following topics:

Topic	Page
Updating Unity Pro with Control Expert	32
Operations Required Prior to an Update of Unity Pro with Control Expert	33
Restoring Projects and Settings After Control Expert Update	37

Updating Unity Pro with Control Expert

Introduction

This section describes the operating modes to update Unity Pro on a workstation with Control Expert.

Updating

An **update** corresponds to the installation of a newer version (for example updating from Unity Pro V13.0 to Control Expert 14.0).

An update requires:

- Operations prior the update (*see page 33*).
- Update of Unity Pro with Control Expert.
NOTE: As Control Expert licenses are not compatible with Unity Pro licenses, the update is very similar to the first time installation procedure (*see page 17*).
- Operations after the update (*see page 37*).

Operations Required Prior to an Update of Unity Pro with Control Expert

Introduction

Before updating Unity Pro with Control Expert, it is recommended that the current project files be saved.

If the previous installed version is earlier than Unity Pro 4.0, the following items must also be saved:

- Custom libraries
- Private ASI catalog

In addition, refer to specific updates (*see page 36*) for older versions of Unity Pro.

NOTE: If the version currently installed on the workstation is **incomplete** for any reason, it must be uninstalled before updating. Then, the new version of Control Expert must be installed using the first time installation procedure (*see page 18*).

Export Current Project Files

This step consists of generating files that are used to migrate projects to Control Expert. Export current projects from the project file format (*.STU) into an archive application file format (*.STA). It is also recommended to export into an application exchange file format (*.XEF).

The file types are:

- *.STU files from previous versions of Unity Pro are not readable on the new version of Control Expert.
- *.STA files are archive files compatible between different versions of Control Expert and Unity Pro. However, these files can only be created for projects that can be successfully built. The advantage of this format is the capability to connect to the PLC after opening the project on a newer version of Control Expert.
- *.XEF files are used for exporting a global project without global DTMs configuration and are compatible with all versions of Control Expert or Unity Pro. Importing an *.XEF file requires a **Rebuild All** of the project.
- *.ZEF files are used for exporting projects with global DTMs configuration and are compatible with all versions of Control Expert or Unity Pro. Importing an *.ZEF file requires a **Rebuild All** of the project

For additional information about file formats, refer to:

- Service in Offline Mode (*see EcoStruxure™ Control Expert, Operating Modes*)
- Users Applications and Projects File Formats (*see EcoStruxure™ Control Expert, Program Languages and Structure, Reference Manual*)

For additional information about project compatibilities with Unity Pro versions and PLC firmware, refer to **Start → Programs → Schneider Electric → SoCollaborative → Unity Pro → ReleaseNotes**.

Create Archived Application File (*.STA)

The following table describes the procedure for generating *.STA files:

Step	Action
1	Launch the current Unity Pro software: Start → Programs → Schneider Electric → SoCollaborative → Unity Pro → Unity Pro xx (xx refers to Unity Pro package).
2	Open the project (*.STU file): ● File → Open. ● Select the project (*.STU file). ● Click Open.
3	File → Save Archive , see note below.
4	Choose a location for the file to be saved. Do not save files in the default Schneider Electric directory: C:\Program Files\Schneider Electric\Unity Pro or C:\Program Files (x86)\Schneider Electric\Unity Pro Files saved in this directory may be deleted during Control Expert installation.
5	Click Save.
6	Remember the location where the *.STA file is stored on the terminal as it is needed when recovering the project.

NOTE:

The **Save Archive** function is only available if:

- The project has been generated.
- The **Tools → Project Settings → General → PLC embedded data → Upload information**, option is selected and at least **Comments** or **Animation tables** is selected.

Create Application Exchange File (*.XEF or *.ZEF)

The following table describes the procedure for generating *.XEF or *.ZEF files:

Step	Action
1	Launch the current Unity Pro software: Start → Programs → Schneider Electric → SoCollaborative → Unity Pro → Unity Pro xx (xx refers to Unity Pro package).
2	Open the project (*.STU file): ● File → Open. ● Select the project (*.STU file). ● Click Open.
3	File → Export Project.
4	Choose a location for the file to be saved. Do not save files in the default Schneider Electric directory: C:\Program Files\Schneider Electric\Unity Pro or C:\Program Files (x86)\Schneider Electric\Unity Pro Files saved in this directory may be deleted during Control Expert installation.

Step	Action
5	Click Export and select the export file format (*.ZEF or *.XEF).
6	Remember the location where the *.ZEF or *.XEF file is stored on the workstation as it is needed when recovering the project.

Save Custom Libraries

Save custom libraries and families as follows:

Step	Action
1	Launch the current Unity Pro software: Start → Programs → Schneider Electric → SoCollaborative → Unity Pro → Unity Pro xx (xx refers to Unity Pro package).
2	Tools → Types Library Manager.
3	Select 1 custom family.
4	Right-click the selected custom family.
5	Click Create an installable family.
6	Choose a location for the installable family to be saved.
7	If <i>sub-types</i> need to be included, select Include sub-types check box.
8	Click OK. Do not save files in the default Schneider Electric directory: C:\Program Files\Schneider Electric\Unity Pro or C:\Program Files (x86)\Schneider Electric\Unity Pro Files saved in this directory will be deleted during Control Expert installation.
9	Save other custom libraries by repeating steps 3 to 8.
10	Exit the <i>Types Library Manager</i> by clicking Close in the <i>Types Library Manager</i> dialog.

After the storage location is defined and the settings saved, several *DSC* files containing the custom library settings will be created.

For more information, refer to *Types Library Manager (see EcoStruxure™ Control Expert, Operating Modes)*.

Save the Private ASI Catalog

If a private *ASI* catalog is used, copy the following files to another directory where they can be recuperated later:

- ...|Schneider Electric|ConfCatalog|Database\Asi |1031|private.ctg, private2.ctg
- ...|Schneider Electric|ConfCatalog|Database\Asi |1033|private.ctg, private2.ctg
- ...|Schneider Electric|ConfCatalog|Database\Asi |1034|private.ctg, private2.ctg
- ...|Schneider Electric|ConfCatalog|Database\Asi |1036|private.ctg, private2.ctg
- ...|Schneider Electric|ConfCatalog|Database\Asi |1040|private.ctg, private2.ctg
- ...|Schneider Electric|ConfCatalog|Database\Asi |2052|private.ctg, private2.ctg

NOTE: Do not save files in the default Schneider Electric directory: C:\Program Files\Schneider Electric\Unity Pro or C:\Program Files (x86)\Schneider Electric\Unity Pro. Files saved in this directory will be deleted during Control Expert installation.

Specific Update Considerations

The following are specific update considerations related to older versions of Unity Pro:

- For Unity Pro V5.0:
The Installer of DTM library cannot completely manage uninstallation of the previous DTMs installed with Unity Pro V5.0. This may lead to incorrect installation of the DTMs (especially the Generic DTMs).
Uninstall previous versions of the LOKI and Generic DTMs (using the Windows add or remove Programs function) before installation of Control Expert.
- For Unity Pro versions earlier than Unity Pro 3.0:
For projects that were built with an earlier version than Unity Pro 3.0, packing the PLC memory in RUN on Premium may lead to stop the PLC. In order to avoid this behavior, after opening the *STA* archive file, perform a **Rebuild All** of the project. Rebuilding the project involves a STOP of the PLC as well as a full download of the project.
For more information, refer to Service in Offline Mode (*see EcoStruxure™ Control Expert, Operating Modes*).
- For Unity Pro versions earlier than Unity Pro 2.0:
As the pin layout for the elementary function block **COM_DB** was changed with Unity Pro 2.0, applications containing this EF and designed with an earlier version need to be exported and imported. Moreover, new variables must be assigned on the inputs and outputs of the EF.
For more information, refer to COMP_DB: Comparison (*see EcoStruxure™ Control Expert, Control, Block Library*).

Restoring Projects and Settings After Control Expert Update

Introduction

After the update of Control Expert is completed, projects and settings can be recovered by restoring in the following recommended order:

Only if the previous installed version is less than Unity Pro 4.0:

- Custom libraries
- Private ASI catalog

For all versions, including less than Unity Pro 4.0:

- DFBs and DDTs in the Type Library Manager
- Archived Application *.STA and/or Application Exchange Files *.XEF

Restoring Custom Libraries

To restore custom libraries, import them using the **Type Library Update** tool.

The procedure is explained below:

Step	Action
1	Close Control Expert if it is open.
2	Start → Programs → EcoStruxure Control Expert → Types Library Update.
3	In the Types Library Update dialog: • Enter the directory of the custom family previously stored (<i>see page 35</i>) on the workstation (DSC file type). • Select the version of the libset where the custom family needs to be installed.
4	Click Install family .
5	The following message may appear: <i>The installation has succeeded but there are warnings.</i> <i>Details are in file: <C:\WINNT\logunit\install.log></i> Disregard this message. Click OK .
6	Repeat steps 3 to 5 for each custom family that needs to be restored.
7	Launch Control Expert: Start → Programs → EcoStruxure Control Expert → Control Expert.
8	Check that all the families have been successfully installed: Tools → Types Library Manager → <Libset> → Custom Lib.

For more information, refer to Types Library Manager (*see EcoStruxure™ Control Expert, Operating Modes*).

Restoring Manually DFBs, DDTs, and FFBs in the Type Library Manager

It is possible to restore the custom libraries manually even if they have not been saved.

This operation is useful in the following cases:

- You forgot to save custom libraries in an installable form (*see page 35*) before updating.
- You have been using custom FFBs defined with EFB Toolkit.

The directory of the custom libraries depends on Unity Pro version installed and the operating system. Generally, they are saved automatically during the installation process in the following directory:

- Unity Pro 4.0 or later:
 - Windows 7 or 10 (32 bits or 64 bits):
C:\ProgramData\Schneider Electric\Unity Pro\CustomLibset\Vx.y
 - Windows XP:
C:\Program Files\Schneider Electric\Application Data\Schneider Electric\Unity Pro\CustomLibset\Vx.y
- Unity Pro 3.1 or earlier:
C:\Program Files\Schneider Electric\Application Data\Schneider Electric\Unity Pro\CustomLibset\OldCustomdbxx.yy

The following table shows how to proceed when replacing Unity Pro 3.1 or earlier:

Step	Action
1	Copy the content of the old custom library from the following directory (example): C:\Program Files\Schneider Electric\Application Data\Schneider Electric\Unity Pro\CustomLibset\Vx.y
2	Paste the content of the old custom library into the newer Control Expert custom library directory: C:\ProgramData\Schneider Electric\Control Expert\CustomLibset\Vx.y
3	Repeat step 1 and 2 for all versions Vx.y where the custom library is needed.

NOTE: *x.y* or *xx.yy* are the version number of the former Unity Pro and Control Expert versions.

Restoring Private ASI Catalog

If the private *ASI*/catalog files were previously saved, they must be restored to their original location (*see page 35*).

Restoring Archived Application File (*.STA)

This restoration consists of importing the *.STA files previously stored (*see page 33*). The *.STA files are used when the PLC cannot be stopped. To restore *.STA files follow the procedure below for each project:

Step	Action
1	Launch Control Expert: Start → Programs → EcoStruxure Control Expert → Control Expert.
2	Open the *.STA file from File → Open menu. The file type selected must be <i>Unity Pro Archived Application File (*.STA)</i> .

Step	Action
3	Click Open .
4	Save the project as an *.STU file.

Restoring Application Exchange File (*.XEF)

This restoration consists of importing the *.XEF files previously stored ([see page 33](#)). Importing from an XEF format involves to re-generate the project. To restore *.XEF files follow the procedure below for each project:

Step	Action
1	Launch Control Expert: Start → Programs → EcoStruxure Control Expert → Control Expert.
2	Open the *.XEF file from File → Open menu. The file type selected must be <i>Unity Pro Application Exchange File (*.XEF)</i> .
3	Click Open .
4	Save the project as an *.STU file.

Chapter 4

Operations Common to Control Expert Installation and Update

Subject of this Chapter

This chapter describes procedures that are common to Control Expert first time installation and update.

What Is in This Chapter?

This chapter contains the following topics:

Topic	Page
Upgrading Control Expert	42
How to Launch Control Expert	43
How to Repair Control Expert	45
How to Transfer a License	46
Drivers	47
Increasing Number of Control Expert Editors Open	48

Upgrading Control Expert

Introduction

This section describes the operating modes to upgrade Control Expert on a workstation where another version is already installed.

Upgrading

An **upgrade** corresponds to the activation of another package license. For example, upgrading from Control Expert V14.0 L to Control Expert V14.0 XL.

An **upgrade** of Control Expert requires activation of the software depending of the type of the licence:

- Node-locked license (*see page 22*)
- Floating license (*see page 24*)

How to Launch Control Expert

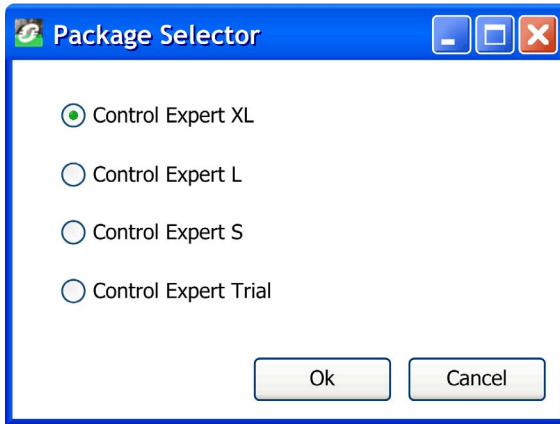
How to Start a Control Expert Session

To launch Control Expert, execute the command:

Start → Programs → EcoStruxure Control Expert → Control Expert.

NOTE: If you have yet to activated the software, a message alerts you of the remaining number of days of use left and whether the activation can still be completed.

At **first start after activation of a valid license**, you have to select the package corresponding to your license on **Package Selector** tool:



NOTE: The **Package Selector** tool differentiates the package (S, L or XL) as shared base and M580 safety is not mentioned.

M580 safety CPUs are included in:

- Control Expert XL with M580 SAFETY license, or
- M580 Safety Add-On license for Control Expert L or XL.

In both cases, selecting the corresponding Control Expert package (L or XL) opens the software with M580 safety CPUs.

How to Change the Language of Control Expert

The following table describes the procedure for changing the language of Control Expert:

Step	Action
1	Execute the command Start → Programs → EcoStruxure Control Expert → Language selection . Result: The Control Expert Language Selection dialog is displayed.
2	Select the language for Control Expert.

Step	Action
3	Confirm with OK . Result: A message tells you that the language selection is effective the next time you launch Control Expert.

How to Repair Control Expert

Objective

This feature allows to completely repair an existing Control Expert distribution if the current installation is damaged.

NOTE: Corrupted DTM installations cannot be repaired. They must be uninstalled using the Windows **remove programs** function and then reinstalled.

There are two methods to repair Control Expert:

- Control Expert setup on the DVD-ROM
- Control Expert repair program on the workstation

NOTE: These procedures perform a complete removal of the Control Expert software followed automatically by a new installation (*see page 19*).

NOTE: These are the only supported methods to repair (reinstall) the Control Expert software. Any other method may not work.

Control Expert Setup Procedure on the DVD

The following table describes the procedure to repair Control Expert from the Control Expert Setup on the DVD-ROM in the maintenance mode:

Step	Action
1	Insert the DVD-ROM named Control Expert in the DVD-ROM drive.
2	Open the Setup.exe file.
3	Select the language for the installation assistant.
4	Confirm by clicking Start Control Expert installation .
5	Select the Repair option.
6	Confirm by clicking Next .

Control Expert Repair Program Procedure on the Workstation

NOTE: Repair command must be executed with Administrator privilege. Do not launch directly the start program shortcut **Repair Control Expert**.

To repair Control Expert from the workstation:

- use the command: **Start → Programs → EcoStruxure Control Expert → Repair Control Expert**.
- right-click on **Repair Control Expert** and select **Run as administrator**.

NOTE: **Repair Control Expert** command does not install Libset files. To update Libset files, it is necessary to uninstall and reinstall Control Expert.

How to Transfer a License

Introduction

In order to transfer a Control Expert license to another user:

First: return the license from the computer and send it back to the Schneider Electric License Server. It is then available for activation on another computer.

Second: Activate the license (*see page 22*) on the other computer.

License Return Procedure

This procedure describes the steps for returning a node-locked license:

Step	Action
1	start License Manager tool.
2	On the Local tab, select the Activation ID of the license you want to return.
3	Select Return . After few seconds, the successfully removed license message appears
4	Click Finish You cannot any more start Control Expert on the computer.
5	Close License Manager tool.

Floating License Return Procedure

This procedure describes the steps for returning a floating license:

Step	Action
1	Start Floating License Manager tool on the Enterprise License Server.
2	On the Local tab, select the Activation ID of the license you want to return.
3	Select Return . After few seconds, the successfully removed license message appears
4	Click Finish You cannot any more start Control Expert on the computers connected to Enterprise License Server.
5	Close Floating License Manager tool.

Drivers

At a Glance

During installation of Control Expert, three drivers can be optionally installed:

- Uni-Telway
- Modbus
- USB

If selected, the three drivers are installed. One driver cannot be installed without the others being installed.

These drivers provide the link between the workstation and the PLC. The driver to be used is selected in Control Expert.

Normally, it is not necessary to change the configuration of the installed drivers. In exceptional cases use the **Drivers Manager** to reconfigure a driver or install a new drivers from **Communication Drivers** directory on the Control Expert DVD-ROM.

For information about drivers installations and configurations, refer to the SetupDrv.pdf in your language in the **Communication Drivers** directory.

Launching the Drivers Manager

To launch the Drivers Manager execute the command:

Start → Programs → EcoStruxure Control Expert → Drivers Manager.

Increasing Number of Control Expert Editors Open

Introduction

After a standard installation use of multiple instances of Control Expert only allows a limited number of editors that can be open at the same time: 15 open editors for the first instance and 6 open for the remaining instances.

Removing Editor Limits

By modifying a Windows registry parameter with the following procedure, the number open editors can be increased:

1. Run the registry editor (%SystemRoot%\WINDOWS\regedit.exe).
NOTE: %SystemRoot% is normally the "C:" drive.
2. Find the registry key:
HKEY_LOCAL_MACHINE
System\CurrentControlSet\Control\Session Manager\SubSystems\Windows.
3. Right-click **Windows** and select **Edit String**.
4. Find the parameter **SharedSection=xxxx,yyyy,zzzz**. **SharedSection** is the first parameter and it is placed nearly at the beginning of the data content.
5. Set the **yyyy** value (in kB) to 8192 (if it was set to a lower value). It controls the size of the desktop heap, which is used for Windows objects.
6. Restart the workstation to have the updated value taken into account.

NOTE: After changing the **SharedSection** value the only limit on the number of open editors is the amount of RAM installed on the workstation.

Chapter 5

Uninstalling Control Expert

How to Uninstall Control Expert

Objective

This operation is used to delete all Control Expert software components from the workstation.

However, this does not affect:

- Application files.
- Control Expert execution rights (Activation IDs are managed with Schneider Electric License Manager).
- Elements shared with other software packages (for example, Control Expert user).

When Uninstalling Control Expert Is Required

Control Expert must be uninstalled manually when installing a version of Unity Pro, for example, installing Unity Pro 13.0 on Control Expert 14.0.

NOTE: Installing a former version of Unity Pro can lead to incompatibility with other software, for example, OFS, UDE and UAG.

Before Uninstalling Control Expert

For Control Expert activated with a node-locked license, it is recommended to return the license (*see page 46*) before uninstalling Control Expert in order to install it onto another workstation.

NOTE: When uninstalling Control Expert, the Schneider Electric License Manager tool might be also deleted if it is not required by any other software.

Uninstalling Control Expert using Start Program Command

NOTE: Uninstall command must be executed with administrator privilege. Do not launch directly the program shortcut **Remove Control Expert**

The following table shows how to uninstall Control Expert manually:

Step	Action
1	Click Start → Programs → EcoStruxure Control Expert . Right-click Remove Control Expert and select Run as administrator .
2	The installation wizard is launched, Control Expert starts being removed.
3	When the uninstallation of Control Expert is completed, select the installed drivers and click Remove .

Uninstalling Control Expert using the Windows Control Panel

NOTE: Uninstall from the Windows control panel would not uninstall the Control Expert PlantStruxure DTM Library. So installation of an older version of Unity Pro (with older version of Unity Pro PlantStructure DTM Library) would fail. In this case, uninstall Control Expert using the start program command (*see page 49*) or uninstalled manually DTM software.

The following table shows how to uninstall Control Expert manually with the Windows control panel:

Step	Action
1	Start → Control Panel → Programs and Features.
2	Right-click Control Expert and select Remove .
3	A pop-up window appears asking for confirmation. Click Yes .
4	When the uninstallation of Control Expert is completed select, in the same manner, the installed drivers, and DTMs and click Remove .

Replacing Control Expert with a Unity Pro Version

To install a previous version of Unity Pro, the current version of Control Expert must be uninstalled using the Windows control panel as previously described.

In addition, the following directories must be manually removed:

- **Windows 7 (32 bits):**
 - C:\Program Files\Common Files\Schneider Electric Shared\Tlb
 - C:\Program Files\Common Files\Schneider Electric Shared\Common
 - C:\Program Files\Common Files\Schneider Electric Shared\SRCSDK
 - C:\Program Files\Common Files\Schneider Electric Shared\SSTA
- **Windows 7 (64 bits):**
 - C:\Program Files (x86)\Common Files\Schneider Electric Shared\Tlb
 - C:\Program Files (x86)\Common Files\Schneider Electric Shared\Common
 - C:\Program Files (x86)\Common Files\Schneider Electric Shared\SRCSDK
 - C:\Program Files (x86)\Common Files\Schneider Electric Shared\SSTA