

Human/Machine Interfaces

EcoStruxure™ Operator Terminal Expert

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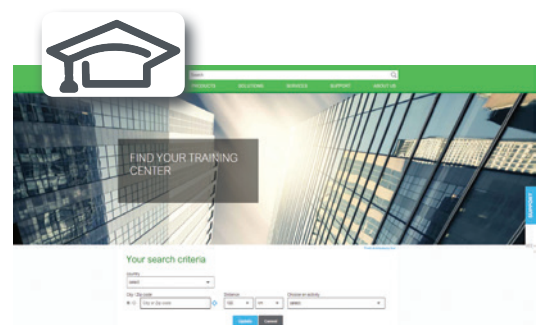
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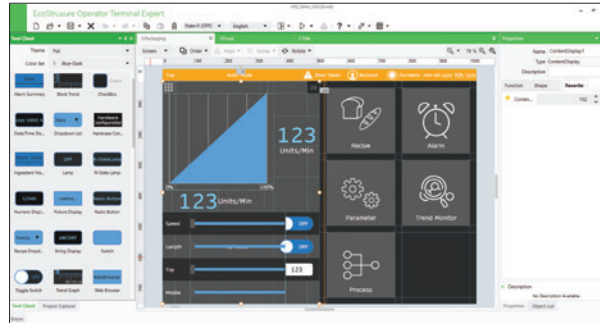
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EcoStruxure™ Operator Terminal Expert



EcoStruxure Operator Terminal Expert allows you to create and edit application screens that control automation systems for Magelis™ GTU (Standard, Premium and Open Boxes)/STO color/GTO/ST6 terminals, and Magelis industrial PCs (Panel and Box).

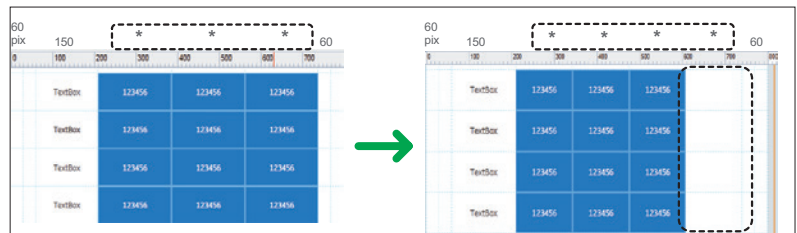
EcoStruxure Operator Terminal Expert features a modern and simple-to-use user interface, easy-to-access functions and information, and a multi-platform working environment. It also shortens design time by providing pre-made navigation framework.



EcoStruxure Operator Terminal Expert with vector graphics

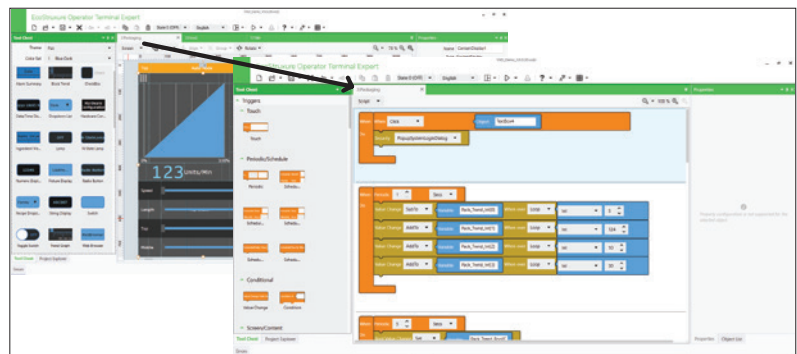
Faster design

- > Responsive grid design allows easy adaptation of the application irrespective of different screen resolutions



Automatic grid adjustment

- > Scripting made easy for everyone using a graphical drag and drop editor

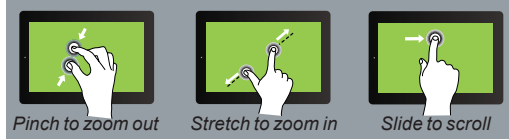


Block scripting

EcoStruxure Operator Terminal Expert → Maximizes efficiency with modern functionalities and user-friendly features

Intuitive operation

- > Multi-touch zoom in/zoom out, slide, pinch, and stretch options similar to smartphones for enhanced user experience



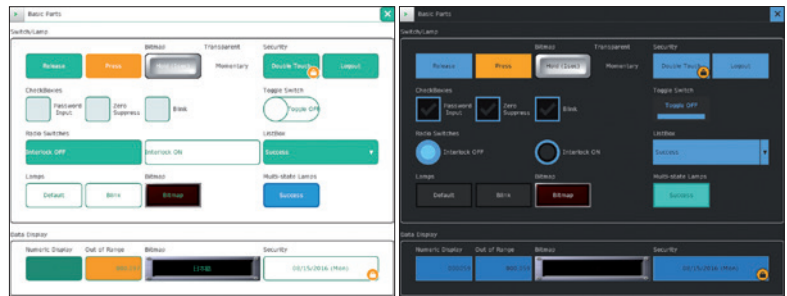
Touch screen gestures

- > Multiple screens displaying various information can be viewed in a single screen


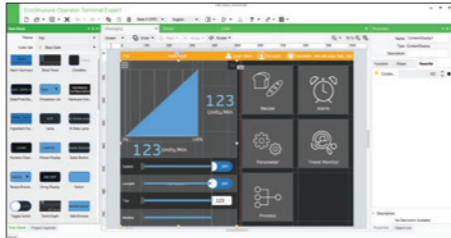


Multi-Screen view




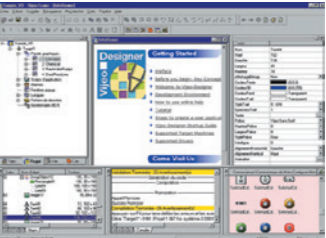
- > High quality graphics and quick adaptation of themes



Themes

Applications		Touchscreen Configuration software with UI design and gestures
		 
Compatible products	Type	Magelis™ STO Color Magelis ST6 Magelis GTO Advanced panels and Magelis GTU Universal panels Magelis Industrial PCs Windows compatible computers
	Maximum number of targets	1
	Operating system on terminals	Proprietary for Magelis STO Color, Magelis ST6 and Magelis GTO/GTU Windows Embedded Standard 7 for Magelis Industrial PCs
Functions	Reading/writing of PLC variables	Yes
	Display of variables	Yes
	Data processing	Yes
	Sharing of variables between HMI applications	–
	Saving of variables to external database	–
Internationalization		16 languages supported by 26 type of fonts
Development of graphic applications	Native library of graphic objects	Yes
	Curves and alarms	Yes
	Scripts	Block Script
Communication between HMI application and PLCs		Via I/O drivers: Schneider Electric or third-party protocols (Mitsubishi, Omron, Rockwell Automation, Siemens)
Uploading of applications		–
Simulation of HMI applications		Yes
Recipe management		Yes, up to 256 recipes, 600,000 ingredients in total
Report and barcode printing		–
Screen capture		Yes, for Magelis GTU Open Box and Magelis Industrial PCs. in PNG format
Access security		Password protected
Interface languages		Online Help in 4 languages (English, French, German, Italian), interface in 10 languages (English, French, German, Italian, Portuguese, Spanish, Japanese, Traditional Chinese, Simplified Chinese, Korean)
OS compatibility		Windows 7, Windows 8, Windows 8.1, Windows 10 (32-bit/64-bit)
Software type		EcoStruxure™ Operator Terminal Expert
Pages		11

(1) All Magelis XBT and Magelis GTO/GTU terminals behave transparently on restoration of power.
(2) Depending on compatible product.

Configuration software for data-intensive and complex visualization		Classic Configuration software for the complete HMI range
		 
		 
Magelis G5U2, Magelis Industrial PCs		Magelis™ STO/STU Small panels Magelis XBTGT/GK/GH/GTO Advanced panels and Magelis GTU Universal panels (1) Magelis Industrial PCs
1		32
Magelis G5U: Windows Embedded 7 Standard Magelis Industrial PCs: Windows Embedded 7 Standard, Windows 7 SP1, Windows 8.1, Windows 10 IoT Enterprise		Proprietary for Magelis™ STO/STU, Magelis™ XBTGT/GK/GH and Magelis™ GTO/GTU Windows XP embedded for Magelis™ GTW
Machine Control: 1,500 tags Line Management: 4,000 tags Line Management Plus: 32,000 tags Supervision: 64,000 tags		Yes, up to 8,000 internal and external variables
Yes, depending on the number of Tags		Yes
Yes, with VBScript or Built-in Scripting		Yes, using expression editor or Java programming
Yes, via TCP/IP, OPC, Driver or Database		Up to 300 variables between 8 terminals, without router PLC Proprietary protocol above TCP/IP
Yes, with relational database (any SQL Database, MS Access and Excel CSV file)		Yes, with the Intelligent Data Service extension
Multi-language (depending on the OS)		Up to 15 languages supported by 34 Western alphabets, 4 Asian alphabets and 2 Middle Eastern alphabets embedded in the application
Yes, user customizable		Yes
Yes		Yes, with log
VBScript and Built-In scripting		Java
Via I/O drivers: Schneider Electric or third-party protocols (Over 250 Drivers: Mitsubishi, Omron, Rockwell Automation, Siemens)		
Yes		–
Yes		
Yes, built-in tools with local file or with SQL DB		Yes, up to 32 groups, 1,024 ingredients for 256 recipes per group, proprietary or CSV format, complete multilingual support for labels and ingredients
Report is a built-in function that executes the specified Report worksheet and sends the output to hard disk, printer, or PDF.		On the fly alarms, log data. Up to 9,999 active alarms, records, or logs Main barcode types supported: UPC-A, UPC-E, JAN/EAN8, JAN/EAN13, ITF, CODE39, CODE93, CODE128, CODABAR (NW-7)
Yes		Yes, for Magelis™ XBTGT (XBTGT1105 and higher), Magelis GTO/GTU, and Magelis Industrial PCs in JPEG format
Linked to user profiles		
Screens, online help, and documentation in electronic format available in 5 languages: English, German, French, Chinese, Japanese		Screens, online help, and documentation in electronic format available in 7 languages: English, French, German, Italian, Portuguese, Simplified Chinese, and Spanish
Windows 7, Windows 8.1, Windows 10 (64-bit), WES7 (64-bit)		Windows XP Professional, Windows 7 Business (32-bit/64-bit)
EcoStruxure™ Machine SCADA Expert		Vijeo Designer™
For more information, please refer to the EcoStruxure Machine SCADA Expert catalog on our website www.schneider-electric.com .		For more information, please refer to the Vijeo Designer HMI configuration software catalog on our website www.schneider-electric.com .

(1) All Magelis XBT and Magelis GTO/GTU terminals behave transparently on restoration of power.
(2) Depending on compatible product.

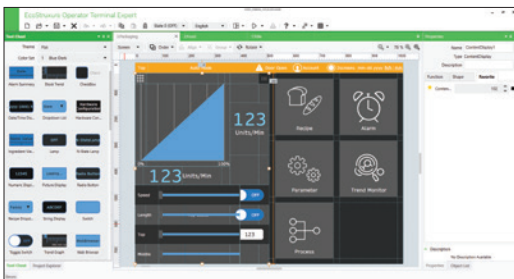


Presentation

The cross-platform EcoStruxure™ Operator Terminal Expert can be used to create HMI applications that control automation systems for:

- Magelis GTU (Standard, Premium and Open Boxes)
- Magelis GTO
- Magelis STO (Color)
- Magelis ST6
- Magelis industrial PCs (Panel and Box PCs)
- Windows compatible computers

EcoStruxure Operator Terminal Expert supports English, French, German, Italian, Portuguese, Spanish, Japanese, Traditional Chinese, Simplified Chinese, and Korean languages and provides access to new application types.

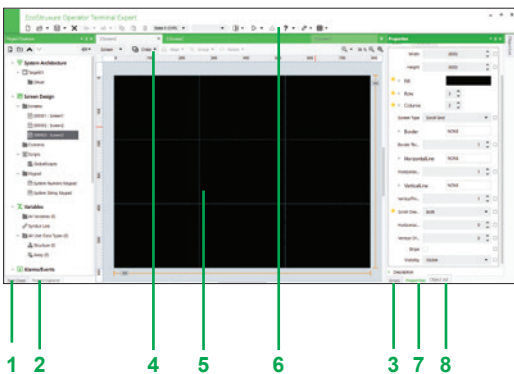


EcoStruxure Operator Terminal Expert with vector graphics

EcoStruxure Operator Terminal Expert runs on any PC with Windows 7, Windows 8, Windows 8.1, or Windows 10 operating system. This supports WYSIWYG (1) of the developed application and the PLC variables (I/O, internal bits and words), and also helps ensure that the application runs securely on Magelis GTU/STO color/GTO terminals or Magelis industrial PCs.

EcoStruxure Operator Terminal Expert supports features for creating and organizing HMI applications:

- Intuitive and simple-to-develop user interface
- Gesture experience by multi-touch, zoom in/zoom out, slide, and stretch
- Templates and theme design selection
- Graphic configuration by Universe “System Architecture” view
- Windows 7 (32/64-bit), Windows 8/8.1 (32/64-bit), Windows 10 (32/64-bit) support



EcoStruxure Operator Terminal Expert window

Configuration

EcoStruxure Operator Terminal Expert is an intuitive configuration software that is used to process HMI projects quickly and easily using the 8 configurable windows:

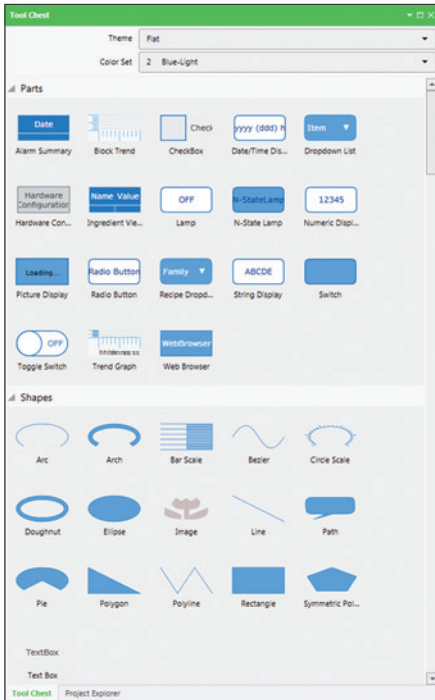
- 1 Tool Chest
- 2 Project Explorer: HMI Content Design, Data Management, Scripts and Actions, System Architecture
- 3 Error window or Feedback zone
- 4 Generic command or Document toolbar
- 5 Editor or Document view
- 6 Application tool bar
- 7 Properties
- 8 Object List

The software also offers a complete set of application management tools for:

- Up to 256 recipes with 600,000 ingredients in total
- Full simulation mode for testing the application from the design office
- Retrieval of symbol files for PLC variables generated by TwidoSuite, PL7, Concept, ProWORX 32, and Unity Pro software (2)

(1) What You See Is What You Get (on the screen of the target terminal).

(2) DDT structured types and “unlocated” variables are not supported in this version.



Parts and Shapes

Graphics editor

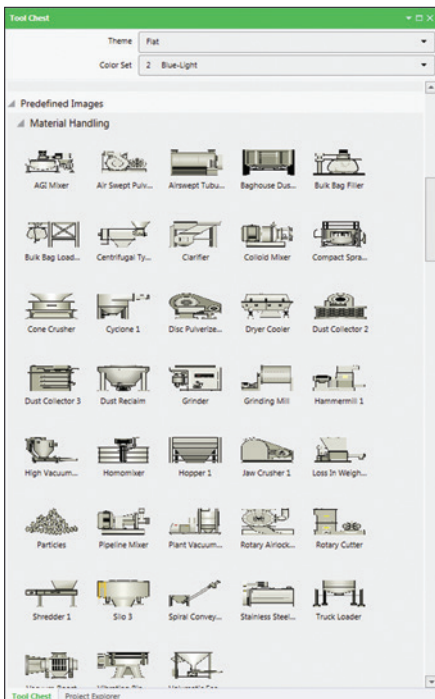
The graphics editor offers interface consistency for simple and more sophisticated objects. This helps application developers to easily create views based on:

- Parts:
 - switches (toggle, radio, selector), lamps
 - text or number fields
 - alarm, trends, recipe ingredient viewer, web browser (1), etc.
- Shapes to be configured:
 - lines, rectangles, ellipses, arcs
 - polylines, polygons, Bézier curves, scales
 - text and images, etc.

Object animations

9 types of graphic-object animations support the rapid creation of animated mimics on the basis of:

- Pressing the touch panel
- Changing of color
- Filling
- Movement
- Rotation
- Size
- Visibility
- Display of associated value
- Object redesign

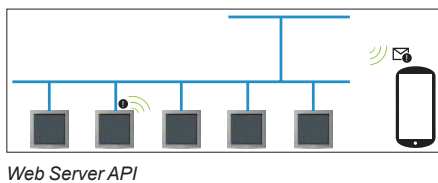
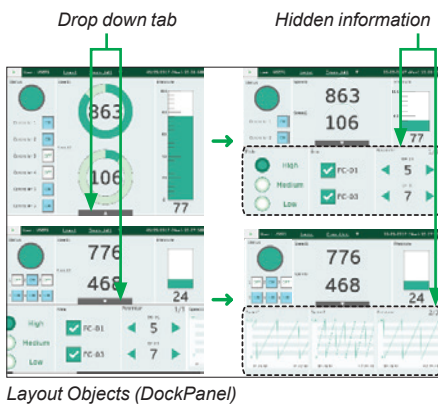
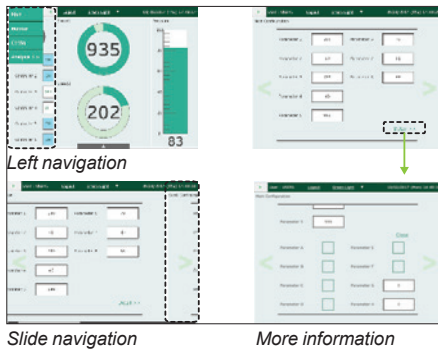


Predefined Images

Predefined Images library

The graphic objects library contains objects for efficiently organizing around the business segments. Using the simple “drag and drop” method, images can be positioned with the mouse on the mimic being created.

(1) Supported in Magelis GTU Open Box/iPCs.



Key features

Runtime Navigation

- Automatic menu generation
- Efficient usage of space: permanent or hidden menus, scroll within the menu that is independent of the rest of the screen
- Less engineering: all information on one screen, free of hierarchies

Layout Objects (DockPanel)

- Embed several pages in one screen and navigate independently in each section
- Screens are automatically resized to fit into the frame
- Frame sizes can be dynamically changed to show different content

Web Server API

- Interface for browsers, both desktop and mobile:
 - Enables delivery of information independent of time and place to any HTML5 browser
 - Enables fast HMI agnostic development of specific customer/use case tailored UI
- WebSockets for subscription based notifications (events) like alarm notifications, system error notifications, etc.
- User Management support (user name/password)

Themes and Color set

- Theme (Studio/Flat themes) and color (10 sets) to preset design
- Quick customization and design consistency by utilizing themes
- Product differentiation

Communication protocols between HMI application and PLCs

Communication is established between the HMI application and the connected control equipment using a communication protocol (driver) that is selected when creating the application in EcoStruxure Operator Terminal Expert.

Schneider Electric protocols

EcoStruxure Operator Terminal Expert supports the following protocols:

- Schneider Electric SA
 - MODBUS TCP Master
 - MODBUS TCP Master USB Equipment
 - MODBUS SIO Master
 - MODBUS SIO Master CT Equipment
 - Uni-Telway
 - PacDrive Ethernet Cx00 - (Codesys V3.5)
 - PacDrive Ethernet LMC x00C - (Codesys V3.5)
 - MODBUS TCP Slave
 - MODBUS SIO Slave
 - MODBUS SIO ASCII Master
 - Zelio Logic
 - EcoStruxure Augmented Operator Advisor
- Siemens AG
 - SIMATIC S7 MPI Direct
 - SIMATIC S7 MPI Direct - 12M (CoPla)
 - SIMATIC S7 Ethernet (LOGO!8 support)
- Rockwell Automation
 - EtherNet/IP
 - DF1
 - DH-485
- Mitsubishi Electric Corporation
 - Q/QnA Series Ethernet
 - Q Series CPU Direct
 - Q/QnA Series Serial
 - FX Series CPU Direct
 - FX Series Ethernet
 - FX Series Computer Link
 - Q Series QnU CPU Ethernet
 - iQ-R/F Series Ethernet
- OMRON Corporation
 - CS/CJ Series HOST Link
 - CS/CJ Series Ethernet
 - CS/CJ/NJ Series EtherNet/IP
- Emerson Process management v Modbus SIO Master
 - ROC Plus SIO
 - ROC Plus Ethernet
- CAN in Automation
 - CANopen Slave (CoPla)
- PROFIBUS International
 - PROFIBUS DP Slave (CoPla)
- Crouzet Automation
 - Millenium 3

All Schneider Electric drivers provide IEC access to input bits/words and output bits/words: Modbus (RTU and TCP/IP), Modbus Plus (GMU and USB), Uni-Telway, Xway.

The direct I/O access authorizes access to hardware input and output registers.

Communication protocols between HMI application and PLCs (continued)

PLC symbols link (1)

EcoStruxure Operator Terminal Expert supports the following protocols:

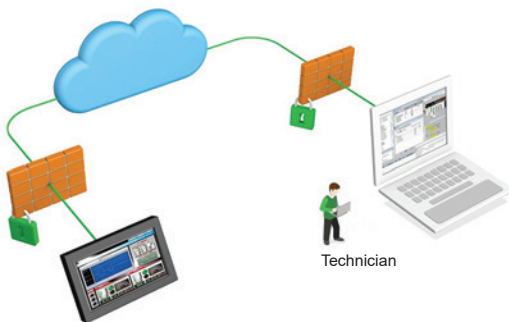
- Schneider Electric SA
 - SoMachine Basic (SMBP format)
 - SoMachine (XML format)
 - SoMachine Motion (XML format)
 - Unity Pro (XVM/XSY format, unallocated variables supported)
- OMRON Corporation
 - Sysmac Studio (NJ series)
- Rockwell Automation
 - RSLogix 5000 (L5K format)

Companion products (2)

EcoStruxure™ Secure Connect Advisor provide a secure connection between remote display units on the work site (via SiteManager Embedded) and computers or smart devices in the office (via LinkManager) over a secure central server (GateManager). With EcoStruxure™ Machine Secure Connect Advisor, maintenance personnel can access Schneider Electric software and update it remotely and securely via the HMI, PLC, and other connected devices as if they were on site. Troubleshooting and repair can also be performed remotely upon request.

(1) Including import of structured variables such as UDTs and ARRAY (of UDT).

(2) For more information, please refer to "EcoStruxure™ Secure Connect Advisor catalog" available on our website www.schneider-electric.com.



Human Machine Interfaces

EcoStruxure Operator Terminal Expert



EcoStruxure Operator Terminal Expert

References

The EcoStruxure Operator Terminal Expert configuration software is compatible with Magelis GTU/ STO7/GTO/ST6 terminals and Magelis iPCs. The software (2) can be downloaded or purchased as DVD from our website www.schneider-electric.com.

EcoStruxure Operator Terminal Expert commercial licenses are available in two formats.

- Printed license: delivered by regular mail with ID authorization
- Digital license: delivered by e-mail after registering with Schneider Electric Customer Care Center

All EcoStruxure Operator Terminal Expert licenses listed below comprise:

- User documentation in electronic format, including:
 - Online help for the software
 - User Manual for the supported targets
 - Setup Manual for the different protocols supported
- Supported communication protocols

A dedicated web portal www.schneider-electric.com/licensing is available for easy registration and management of software licenses. With this portal, you can access new functions and have more control over your license:

- Instant license activation and easy account management
- Online view of license status from anywhere

EcoStruxure Operator Terminal Expert

Printed licenses

Description	License type	Application transfer cable		Reference
		PC side port	Terminal side	
EcoStruxure Operator Terminal Expert Professional Single license	1 seat	USB/ Ethernet	Magelis GTU Magelis GTO Magelis STO7	HMIPELCZLSPMZZ
EcoStruxure Operator Terminal Expert Professional Group License	3 seats		Magelis ST6 Magelis iPCs and other PCs	HMIPELCZLGP MZZ
EcoStruxure Operator Terminal Expert Professional Team license	10 seats			HMIPELCZLTPMZZ
EcoStruxure Operator Terminal Expert Runtime license for Windows	Runtime			HMIRTWCZLSPMZZ
EcoStruxure Operator Terminal Expert Basic license	Basic 1 seat		Magelis STO7 Magelis ST6	HMIPELCZLSPMZZ
EcoStruxure Operator Terminal Expert DVD Software 3.1	–	–	–	HMIPEDCZ31

Digital licenses (1)

EcoStruxure Operator Terminal Expert Professional Single license	1 seat	USB/ Ethernet	Magelis GTU Magelis GTO Magelis STO7	HMIPELCZLSPA ZZ
EcoStruxure Operator Terminal Expert Professional Group license	3 seats		Magelis ST6 Magelis iPCs and other PCs	HMIPELCZLGP A ZZ
EcoStruxure Operator Terminal Expert Professional Team license	10 seats			HMIPELCZLTP A ZZ
EcoStruxure Operator Terminal Expert Professional Fixed Term license 3 months	1 seat			HMIPEXCZLSRA ZZ
EcoStruxure Operator Terminal Expert Runtime license for Windows	Runtime		Magelis iPCs and other PCs	HMIRTWCZLSPA ZZ
EcoStruxure Operator Terminal Expert Basic license	Basic 1 seat	–	Magelis STO7 Magelis ST6	HMIPELCZLSPA ZZ

(1) Please contact Schneider Electric Customer Care Center to check if the digital licenses are distributed/available in your country.

(2) After installation, the trial version of the software is available for 42 days and will have to be activated with the commercial license.

Note: The EcoStruxure Operator Terminal Expert Runtime installer uninstalls Vijeo Designer Runtime, but Vijeo Designer Runtime can be reinstalled again with EcoStruxure Operator Terminal Expert Runtime.

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HMIPELCZLGPAZZ	11
HMIPELCZLGPMZZ	11
HMIPELCZLSPAZZ	11
HMIPELCZLSPMZZ	11
HMIPEXCZLSRAZZ	11
HMIPELCZLTPAZZ	11
HMIPELCZLTPMZZ	11
HMIRTWCZLSPAZZ	11
HMIRTWCZLSPMZZ	11



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