

# Release straton 14.0

[sales@straton-plc.com](mailto:sales@straton-plc.com)



**straton**



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# 1. Overview

Thank you for using the STRATON AUTOMATION software suite.

This document describes the main new features and improvements of the latest straton version.

## 1.1. Sales and Licenses

If you need any additional information, we will be glad to help you.

You can send an e-mail to [info@straton-plc.com](mailto:info@straton-plc.com)

For sales-related question, please send an e-mail to [sales@straton-plc.com](mailto:sales@straton-plc.com)

## 1.2. Support

The Customer Services Team is available to support you on projects you may have. You can contact them via email at [support@straton-plc.com](mailto:support@straton-plc.com).

Your questions are managed through a software tool creating a unique identifier, helping us to track your requests. Please keep this identifier in the subject of your email.

Videos are available at <https://www.youtube.com/channel/UCEbOkLKIVMZKaYPWStXcJug>.

## 1.3. Supported operating system

Operating system	Required service pack
➤ Windows 10	
➤ Windows 11	

## 1.4. Compatibility

Projects developed with previous versions can be open and compiled with straton 14.0.

The following picture shows various cross-compatibility use cases:



- 1- A project developed with editor version N can be open with editor version N+1.
- 2- A project running on a runtime version N can run on a runtime version N+1.
- 3- A project developed with editor version N and compiled without any change with editor version N+1 can still run on a runtime version N.

**Warning:** if you make any change in the project you may use new features which are not supported by the runtime version N.

It is not recommended to program an application for a runtime in version N+1 with the editor version N, neither to create or open a project with straton version N+1 and open it in previous versions.

**Warning:** The straton editor V14 works with UNICODE character set. All strings in you programs (comment texts or STRING constant values) are now stored as UTF8 on the disk. Thus, when opening an old project with V14, it needs to be converted so that all strings are turned from ANSI to UTF8 encoding.

## 2. Major enhancements

This chapter contains a summary of the major enhancement and new features of straton version 14.0.

### 2.1. Tutorial for porting straton on a micro-controller

A new tutorial is available for OEMs wanting to port the straton runtime on a micro-controller. This tutorial describes the experience of porting the runtime on a STM32 processor with FreeRTOS. It includes some guidelines and the full source code of the port.

### 2.2. Update OPC-UA drivers with Open62541 stack V1.3.2

The client and server drivers for OPCUA now use the latest V1.3.2 version of the Open62541 OPC-UA stack. Refer to <https://www.open62541.org/> for more details.

### 2.3. GUI enhancements

The “soft oscilloscope” tool now gives the possibilities to set pointers in the diagram, in order to display information about multiple variables, and to give some statistics.

The box for selecting MODBUS devices in the MODBUS Master configurator library includes some tools to search/filter devices in a huge library.

### 2.4. Widgets API now available for wide character strings

A new set of APIs working with UNICODE (UTF16) character strings is now available for all straton widgets and public libraries.

APIs working with multibyte character strings (ANSI MCBS) remain available.

### 2.5. New blocks for sending HTTP requests

Some new blocks are available for straton to send some HTTP and HTTPS requests. Blocks are implemented for Linux, using the CURL open source library.

### 2.6. New function blocks in the standard library

Some new blocks were added to the JSON library for management of “Boolean” values in JSON text.

A new block “DTMake” enables to build date and time stamps according to VSI function conventions.

## 2.7. Python wrapper for the “CP5” library

The CP5 library delivered with the Development Kit includes an ANSI C library that enables an easy implementation of our T5 protocol for basic operations such as start / stop / download / read and write variables. Together with the library delivered as C source code, the Development Kit now includes a wrapper for Python language.

### 3. Detailed list of new features

Ref.	Description
	<b>Development Kit</b>
272323	PYTHON wrapper for CP5 library
	<b>Drivers</b>
264255	EIP scanner - block for resetting the connection to a device
268597	MODBUS library of devices - enhance GUI
259312	Update STRATON OPCUA drivers with Open 62541 stack V1.3.2
271274	Straton - Profinet GSDML version update+
265517	Provide a set of "C" function blocks to wrap CURL library
	<b>Editors</b>
271636	DDK: Better management of editing flags in the fieldbus configurator
270415	DDK: Open the Edit box for the BUS level when a configuration is open
260148	Hook for OEM to overload HTML generation
268072	CSV export - fill all cells
261898	Soft scope - Single cursors 1 and 2
261899	Soft scope - Statistics between cursors
261900	Soft scope – Export
264034	Support command line options in K5PI
269135	Dispatch new events (build/load) to K5PI interface
272531	k5pi.dll: New connect and disconnect functions
274672	Add K5PI commands to start/stop monitoring of projects when online
	<b>Runtime</b>
270579	Tutorial, sample and tools for porting the Embedded HMI to STM32/FreeRTOS
271919	Support OpenSSL 3 (TLS1.3) in STRATON runtimes
271671	New FB to build DT-like date/time stamps
269673	Allow to change the array passed to FIFO or LIFO blocks
270103	JSON Runtime library: support boolean values
	<b>XML export</b>
265322	XML export: add the prototypes of operators, functions and sub-programs



## 4. Fixed defects

	Compiler
264117	Invalid expression on LD coil does not generate a compiling error
267050	Corrupted file may lead to a crash of the compiler
268490	Crash when converting LD to FFLD
265412	Unexpected warning when compiling several projects with the same fieldbus configuration
269910	X5Monitoring: "Generate monitoring application when download" does not work
269950	Compiler should warn if a JSON function requires dynamic memory allocation
273536	Bad conversion from LD to FFLD
	Debug
269872	X5Monitoring.ocx: Error message "cant load driver" (\K5NET5.dll)
263237	Logic Studio: Workbench does not always support WSTRING max length of 32.000
	Documentation
265630	[DOCU] Help about wstring should refer to "UCS2" instead of "UTF16"
265671	[DOCU] Information missing in MODBUS master documentation
	Drivers
272447	J1939: PGN "RQST2" defined with a bad length
269562	CAN - incorrect scaling after export to DBC file
262098	DATASERVER - the value flash when you change to many time the page
262099	DATASERVER - the connection don't appear correctly on websocket
263330	CGI - Build error multiple definitions of "g_iMaxTry"
262121	[DOCU] CGI/FCGI doesn't work on Raspberry PI 64 bits
268941	MODBUS library should propose some modules checked by default
270298	MODBUS Master library should enable TCP/Serial filtering
265405	Modbus - storage 4 words doesn't work with <16> write holding register
268882	MODBUS: should give an option to always display offsets instead of addresses
262366	OPCUA Server CTT - Segmentation Fault when executing an Attribute Write Values' test
267097	Fieldbus compiler: linking structure datatype variables is not possible anymore
266018	Bad behavior when exporting a shared memory config. to structure
	Editors
264264	"F1" shortcut does not work for blocks "ISNAN" & "ISINF"
263875	Using the Diff Tool's DLL seems to have negative impact on the icons
264298	Multi-lines comments from an FBD program are badly displayed in the GIT integrated DiffTool
268668	Bug on straton editor when running simulation "Cant load driver"

270806 JSON blocks - JsonFindMember does not return handle of the searched member

272012 Bad management of negative expressions of REAL/LREAL with option NOLREALPREFIX set

272444 "Comment" field available at a project creation seems to not be taken in account

272528 Straton Workbench takes very long to open if a configured network printer is not available

271179 FFLD - Compile error when using constant expression with negative REAL

271207 Converting a project to UTF-8 deletes FFLD program data

271728 The connection ID of mqtt change after xml import

272435 Fieldbus Configuration - remove <doc> through the "Edit Configuration as Text..."

271085 FIELDBUS - EtherCAT level 1 properties cannot be validated if using the Edit box

271087 FIELDBUS - Ethernet/IP Tag Client level 1 properties cannot be validated if using the Edit box

270763 Import of ApplicomIO XML file does not delete existing modules

263926 OPCUA Client - Combo box limits usable characters to the visible ones

265320 Fieldbus disabled in the target configuration should not appear in the bus selection box

265407 FIELDBUS - Impossible to add the Level 2 of the "link with HTTP" configurator

265413 FIELDBUS - The Level 1 of the configurators are not displayed correctly when disabled

270461 Export of graphics as HTML5 should propose "websocket" mode per default

268161 IEC61850-7-420 ed2 Some missing DO's and LN's on the new standard

271902 Adapt conditions (C3 and Nampl1 for 420 standard)

265833 IEC 61850 SCL editor - pieces of information not stored in the SCL file

267886 Strange numbers with the program name added during drag & drop to ST

266140 Crash when creating a zenon logic project

263635 Workbench display problems on high resolution monitor

#### **Libraries**

265442 Visualize complete Libraries path for long pathnames

#### **Runtime**

273165 Some scenario with JSON functions crashes the runtime

266472 JSON Block "JsonNewArray" leads to a segmentation fault of the target

266193 REPLACE\_W call leads to a crash

267005 T5 Runtime - Embedded software missing : IEC61850S\_write, IEC61850S\_read...

264734 Ladder - the date is cut when you use the DTFORMAT Block

263329 Raspberry Pi runtime - initial download from the workbench asks for a download password

270595 replace\_w ("1234567890", "abc", 2, 9) should return "12345678abc"

270277 JsonMemberName() crashes the runtime if argument is not a member (no member name)

270787 On Line change problems on Linux platforms when both DDKC and DDKCPP drivers are used

#### **XML import/export**

267222 XML export reports wrong widths for branches in a LD divergence  
273034 XML import: no or bad error report in case of an invalid XML file  
264277 XML import fails if POU note begins with a '=' character  
263480 PLCopen TC6 program file not totally imported  
265250 FBD lines routing badly exported in XML  
269147 XMD: Bad reading of GSDML with specific comment tag