



JetSym

Versions Update

from V4.43 to V5.00

Jetter

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1 Introduction

Overview of Version Update			
Version	Function	expanded	corrected
V5.0.0	Splash Screen Deactivation	✓	
	New Data Types in STX Language	✓	
	Removal of All Obsolete Data Types in STX Language	✓	
	Simulation Controller Type "JetSTX-VM"	✓	
	Improvements within Intellisense	✓	
	Controller List at Future Parallel Installations	✓	
	Highlighted Search Text in "Find in Files" Windows	✓	
	Saving the Split Window Position	✓	
	Memory Protection at STX Programs	✓	
	JetSym Supports Team Foundation Server®	✓	
	Grouping in Function Tree	✓	
	Simplification of Jetter-ETH System Bus	✓	
	Text Length Verification at User Inputs	✓	
	List of Automatically Included Files	✓	
	News of the Project Tree	✓	
	Pure TCP-Connection with JetSym(ST)-Projects	✓	
	Line Feed in Tooltips	✓	
	Compilation Speed Increased	✓	
	Enumeration Variables in Setup and Monitor Windows	✓	
	Original Data Dump Files ".da" also with STX Controllers	✓	
	Expanded Dialog "Save Project As"	✓	
	New Oscilloscope Features	✓	
	Motion API: Problem with Command "AxisMoveVelocity"	✓	
	Bit Structures in Setup and Monitor Windows		✓
	Troubles with Tooltip under Windows XP SP2		✓
	Tooltip Value Display of Variables of Type "numeric"		✓

	Status Bits Labeling of Module "JX3-CNT"		✓
	Button "OS-Update" on JX2-Axis Page		✓
	Checkbox "Show Icons"		✓
	Two Windows of the same CPU open		✓
	Exception in Setup of "JX3-MIX2"-Module		✓
	Misbehavior with "Save Project As"		✓
	No Function Parameter Information within Catch Blocks		✓
	Bug in Command "Add or Remove Buttons"		✓
	Missing Operating System Update Files		✓
	Write Protection of Library Files		✓
	Exception Error in Hardware Manager		✓
	Wrong Comment in Module Setup		✓
	Online Help Window with Two Monitors		✓
	Incorrect Initialization Data with Module "JX3-DIO16"		✓
	Feature Highlighting the Same Text		✓
	Task Local Variables in Intellisense within the Program Editor		✓
	Program Crash during the Work with the Program Editor		✓
	Incorrect Value in File "MC.ini"		✓
	MC-Initialization of CAN Axes		✓
	Horizontal Scroll Bar in Monitor Window		✓
	STX Program Download to an Incorrect Folder		✓
	Incorrect Conversion from JetSym ST to STX		✓
	Crash of Controller "FMC-01" with non-initialized pointer		✓
	Display Problem with "Rebuild All"		✓
	Conversion Error von Motion Wizard to Motion API		✓
	Options for Reference Mark		✓
	No Highlighting in Tooltip		✓
	Incorrect Window Display after "Rebuild All"		✓
	Wrong Evaluation of Expressions in Monitor Window (STX)		✓

	Setting New Values to Locale Bit Variables not Possible		✓
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2 Expansions

A few new expansions cause some user adjustments on STX projects created and edited with previous version of JetSym. Please refer to the online help for details.

2.1 Splash Screen Deactivation

There is a new user option available to deactivate the display of the splash screen when JetSym program is started. The setting of this option can be done in property page "Workspace" of the dialog to be opened by command "Tools/Options":

2.2 New Data Types in STX Language

Two new data types inside the STX program language are introduced with this JetSym version: "RegString" and "Dword". Variables of type "Dword" can contain unsigned integer values from "0" to "4294967295". In variables of type "RegString" text strings are put into using the same format as in text variables inside the controller's register ranges. Refer to the online help for more information on this topic.

2.3 Removal of All Obsolete Data Types in STX Language

All data types in STX Language declared as "obsolete" by the compiler of JetSym Version 4.x like "TString" or "TFilename" are now removed. Any further use will not be allowed anymore, the compiler then fires an error message.

2.4 Simulation Controller Type "JetSTX-VM"

A simulation controller of type "JetSTX-VM" is now integrated with this JetSym version. It offers the possibility to test STX programs or program fragments without the need of working with a real controller.

2.5 Improvements within Intellisense

Some improvements and optimizations within Intellisense were implemented to increase its own stability. "#pragma" statements to reduce the number of parameters and functions are now also followed when working with it in setup windows. Read-only properties are now displayed with a dedicated icon for a better differentiation from writable ones.

2.6 Controller List at Future Parallel Installations

If this or future JetSym versions are installed parallel to each other, then the controller list of each version remains unaffected. Previous versions could then offer new controller

types, which were not available at the time this particular version was released. This sometimes caused some unpleasant side effects.

2.7 Highlighted Search Text in “Find in Files” Windows

The text to be searched is now highlighted in the “Find in Files 1” and “Find in Files 2” windows. The highlighting is done in form of a yellow background by default. The background color can be selected by the user.

2.8 Saving the Split Window Position

The split position is now saved in all split window types of the hardware manager. The saving is performed for each window type separately. Even when the window is closed and then reopened, the splitting line remains at the same position as it used to be before that particular window type was closed.

2.9 Memory Protection at STX Programs

From this version onwards a memory protection is implemented affecting all STX programs. It protects the interpreter from overwriting memory of the controller's operating system to prevent it from crashing.

2.10 JetSym Supports Team Foundation Server®

Besides Subversion® and Source Safe® JetSym now supports the source code management program Team Foundation Server® from Microsoft®. To be able to work with this program the software Team Explorer® needs to be installed on the computer.

2.11 Grouping in Function Tree

A grouping is now performed in the function tree to get a better overview. The grouping's behavior can be influenced by the user to a certain degree.

2.12 Simplification of Jetter-ETH System Bus

The Jetter-ETH system bus has been simplified. The bus node ID has been replaced with a “GNN” (“global network number”), which is unique among all members of the complete network. A manual user-input of the network number is possible. The entered number will be validated and checked for possible inconsistencies.

2.13 Text Length Verification at User-Inputs

Within JetSym ST and JetSym STX projects user inputs to string variables will be checked if the length of the entered text exceeds the one defined in the variable itself. If the entered text is too long, then it will be cut from the back up to the defined length.

2.14 List of Automatically Included Files

In a newly created property page inside project settings dialog all files are listed which were included automatically to a project. The user has even the possibility to remove certain include files and replace them with his or her own ones if they fulfill the preconditions necessary.

2.15 News of the Project Tree

Self-created project files and folders can now be renamed directly in the project tree itself. Additionally it is possible to move files within the project tree using Drag&Drop.

2.16 Pure TCP-Connection with JetSym(ST)-Projects

If a TCP connection is set in the controller settings of a JetSym or JetSym ST project, then the connection can now be established, even if the UDP communication is blocked by a firewall.

2.17 Line Feed in Tooltips

Within longer tooltip texts appearing in functions or in structures carriage return line feed pairs are now inserted at appropriate positions to improve readability.

2.18 Compilation Speed Increased

The compilation of some programs could take a very long time if larger projects were located on network drives. The compilation speed of such projects has now been increased.

2.19 Enumeration Variables in Setup and Monitor Window

In setup and monitor windows values of enumeration variables are now shown by displaying the according enumeration text instead of the blank number. When opening the user-input dialog there is now possible to select between the different enumeration texts with the help of a combo box.

2.20 Original Data Dump Files “.da” also with STX Controllers

Data dump files in the original text-based format with extension “.da” can now be uploaded from STX controller types. Previous JetSym versions only supported the upload of data dump files in XML format with extension “.stxda”.

2.21 Expanded Dialog “Project Save As”

Data dump files in text format with extension “.da” can now additionally be uploaded from STX controller types. Previous JetSym versions only supported the upload of data dump files in XML format with extension “.stxda”.

2.22 New Oscilloscope Features

At the recording it is now possible to focus on a bit of a register value by using a user-adjustable filter function. This can be very useful for instance when recording status register values. There is also a new oscilloscope file format available which saves the data recorded in a compressed file to save memory on the hard disk.

3 Eliminated Software Bugs

3.1 Motion API: Problem with Command “AxisMoveVelocity”

A problem in command “AxisMoveVelocity” in Motion API 1.0.0.3 was resolved. The actual version of the Motion API is 1.0.0.4, which replaces version 1.0.0.3. Projects using older versions of the Motion API should be updated to use the new one.

3.2 Bit Structures in Setup and Monitor Windows

Under certain circumstances the bit structures were not displayed correctly in the setup and monitor windows.

3.3 Troubles with Tooltip under Windows XP SP2

When running JetSym under Windows XP Service Pack 2 a tooltip had been kept displayed until it was closed automatically after approximately five seconds. Whenever this scenario happened, the tooltip could not be opened anymore.

3.4 Tooltip Value Display of Variables of Type “numeric”

The Tooltip on a variable of type “numeric” mistakenly was not just showing its value, but also the value of the indirectly addressed register.

3.5 Status Bits Labeling of Module “JX3-CNT”

Status register bits 19 and 20 of Module “JX3-CNT” had an incorrect labeling on the corresponding side within the hardware manager. The label “Lower/Upper Limit reached” has now been replaced by “Lower/Upper Limit exceeded”.

3.6 Button “OS-Update” on JX2-Axis Page

The button “OS-Update” was always shown grayed (=disabled), because an update of a JX2-Axis operating system is not possible. Because the operating system update of a JX2-Axis is never enabled and it is no concrete plan made yet to make it possible. Therefore this button has now been made invisible to avoid confusion.

3.7 Checkbox “Show Icons”

The status “Show Icons” on property page “Editor” inside the “Options” dialog was never taken over.

3.8 Two Windows of the same CPU open

If the controller type was switched to “JC-64x” or “JC-64x STX” within an open “CPU” window, then the window of the same CPU could be opened a second time, even this must not happen at all.

3.9 Exception in Setup of “JX3-MIX2”-Module

An exception was fired as soon as inside the setup page of a “JX3-MIX2”-Module in the hardware manager register no. 1800 was made visible.

3.10 Misbehavior with “Save Project as”

During the copying process of a project there were mistakenly two folders with the same name created for certain files. JetSym could crash when it was closed after copying a project, but without saving it even when prompted to do so, and the project was then reopened by a double click on the workspace file within the windows explorer.

3.11 No Function Parameter Information within Catch-Blocks

When a function was inserted inside a “Catch”-Block, then Intellisense did not show any parameter information at all.

3.12 Bug in Command “Add or Remove Buttons”

In the menus opened by the toolbar’s command “Add or Remove Buttons” there were had missing entries and wrong icons in the list.

3.13 Missing Operating System Update Files

After the installation of JetSym Version 4.4.2 and 4.4.3 the current operating system update files were missing in the JetSym’s subfolder named “OS”. With this version they are now installed again.

3.14 Write Protection of Library Files

Since JetSym Version 4.4.0 all library files will be set write protected after unzipping them. But if it was installed over a version 4.3.x without de-installing the older version first, then the library files could still be overwritten. From now on the write protection flag is set automatically when loading the workspace.

3.15 Exception Error in Hardware Manager

An exception was fired if the user opened the setup page of an “unknown module” by a double click. Because the label “unknown label” is reserved for a periphery module, the labeling will be “unknown axis” for axes. Another exception occurred whenever the user deleted the module configuration by removing its module over the context menu of the hardware manager.

3.16 Wrong Comment in Module Setup

In the hardware manager’s setup page of the modules JX3-DIO16, JX3-DI16, JX3-DO16, JX3-AI4, JX3-AO4, JX3-DMS2, JX3-THI2-TC and JX3-THI2-RTD there was a wrong comment, that the operating system cannot be updated.

3.17 Online Help Window with two Monitors

Troubles occurred when working with the online help on a PC with two monitor are now avoided by opening the JetSym online help in a maximized window on the monitor it was displayed last.

3.18 Incorrect Initialization Data with Module “JX3-DIO16”

Initialization data for a module of type “JX3-DIO16” were written to the file “ModConfig.da”, even there were not defined any.

3.19 Feature “Highlighting the Same Text”

There were a few unrequested behaviors of the new feature highlighting a selected text, when they were motion commands in the source code. They are now fixed.

3.20 Task Locale Variables in Intellisense within the Program Editor

Within the program editor Intellisense incorrectly offered all task local variables after entering a task identifier followed by the dot character. If a variable was then selected, then compiler errors occurred during the project build.

3.21 Crash during the Work with the Program Editor

JetSym crashed occasionally when working in the program editor with an active Intellisense.

3.22 Incorrect Value in File “MC.ini”

After moving an Ethernet axis the value “\$Options” in the file “MC.ini” was not correctly generated.

3.23 MC-Initialization of CAN Axes

In JetSym motion control the MC-initialization of CAN axes failed in case they were set to simulation mode.

3.24 Horizontal Scroll Bar in Monitor Window

There is now a horizontal scroll bar available in the monitor window as soon its whole content cannot be shown because of the column widths.

3.25 STX Program Download to an Incorrect Folder

An STX program could be transferred to an incorrect folder in the controller’s file system, after the user had worked in this particular system using the JetSym’s file manager.

3.26 Incorrect Conversion from JetSym ST to STX

The command “When_Max....Then” was converted incorrectly from JetSym ST to STX. Compiler errors then occurred when building the converted JetSym STX project. At the conversion of a “case” statement the “break” statement was placed mistakenly within a “RegCopy” command or with the word “end_if” of an “if” clause.

3.27 Crash of Controller “FMC-01” with non-initialized Pointer

The operating system of a controller type “FMC-02” crashed when accessing data with a pointer which had not been initialized before.

3.28 Display Problem with “Rebuild All”

If windows within JetSym were enlarged or reduced during a rebuild of a project, then these windows could be displayed incorrectly.

3.29 Conversion Error from Motion Wizard to Motion API

The command “MotionHome” was converted incorrectly from Motion Wizard to Motion API. The reference run with just a reference switch was converted to one with additional limit switches.

3.30 Options for Reference Mark

In the Motion Setup the options for the reference mark were not adjusted to the drive type and the operating system.

3.31 No Highlighting in Tooltip

Under certain circumstances the incorrect actual parameter was highlighted in the tooltip opened by Intellisense.

3.32 Incorrect Window Display after “Rebuild All”

Resizing windows during the rebuild of a project could end up in displaying certain windows incorrectly.

3.33 Wrong Evaluation of Expressions in Monitor Window (STX)

In the monitor window of a STX project some expressions were not evaluated correctly under certain circumstances.

3.34 Setting New Value to Locale Bit Variables not Possible

In the setup window a new status of bit variables referencing to local variables with memory with less than 4 bytes like "word" or "int8" could not be set. Instead of the new value the error message "Invalid STX protocol parameter" was shown.