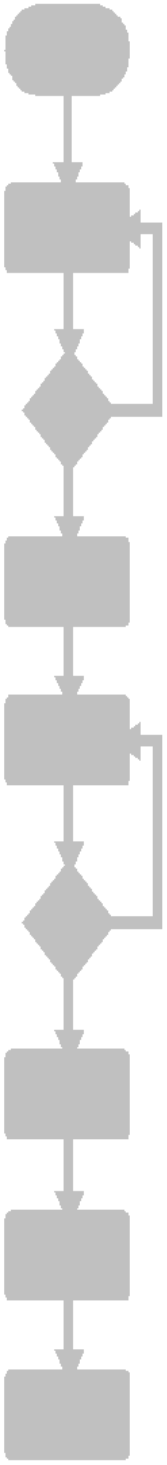

JetSym
Versions Update
from V4.32 to V4.40

Jetter

Auflage 1.00

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2 Expansions

2.1 No empty File after unsuccessful Data Upload

If a data dump upload is aborted because of any reason, the content of a previous saved file under the same name will not be overwritten.

2.2 Expansions in Monitor Window

In the Monitor window Integer values can now be displayed in binary as well as in hexadecimal format. Static members are now shown there too. Additionally the user has the possibility to disable the display of sub-expressions.

2.3 Tooltip shows full File Path in Project Tree

Inside the project tree the full path of a file can be evaluated by displaying the tooltip of the corresponding symbol. If the string is too long to be displayed completely, then a carriage return/line feed pair is inserted automatically.

2.4 Expansions in Hardware Manager

Values displayed in the Hardware Setup can now be put into the clipboard even when the edit box just has the focus without a showing cursor in it. The new SV- and the new JX3-EIPA module are now supported. A browser to monitor the controller's file system is available.

2.5 News about the Program Editor

The bookmark will now be displayed in the middle of the editor. Same words can be highlighted by a double click on the word required. An existing content in the clipboard is only overwritten by the copy command in case of a non-empty text selected. With the help of the key combinations Strg+"+" and Strg+"-" the user can jump between the last locations previously edited. The key combinations Alt+"+" and Alt+"-" moves the current program line up and down.

2.6 New Features of Setup Window

The display format (decimal, hexadecimal, binary) of integer values can now be altered for a complete line block with just one call. The width of the hexadecimal and binary display is adjusted to the memory with of the variable monitored. When moving the cursor within the binary display the bit number is also shown in the “Number” column. Static members can now be monitored. The setup editor saves the display settings when an array or structure is collapsed and takes theses settings over when it is expanded again. There is the possibility to monitor task local variables by entering the expression “taskname.variablename”. A setup document can now be altered even it is write-protected. At the attempt to save it the dialog “Save As” is displayed. With an additional command in the context menu, “Go to Definition”, it can be jumped to the location where the variable or task is defined.

2.7 Expansions in Oscilloscope Window

The operation and creation of new channels is now simplified. There are now up to 32 channels available in case the controller supports this as well.

2.8 New Motion Setup

The new completely revised motion setup is available for single axis. It is far more user-friendly than previous versions. Input values out of range are now highlighted in red color. The information shown in the tooltips has been adjusted to the Motion API. At the motor selection it is shown if there are different parameter sets possible depending on the circuit voltage the motor is operated. In the setup pages there is now the motor travel area displayed graphically and additionally a mini-oscilloscope is shown. Several file operations like save/load as well as up-/download are supported.

2.9 Motion API Version 1.0

The Motion API Version 1.0 is introduced with this JetSym version.

2.10 Predefined Constants

From this version onwards there are useful predefined constants like the project name available. A list of these constants can be found in the online help.

2.11 Reset Settings to Defaults

There is a possibility to reset all JetSym user settings like window positions to their default values. It is necessary to close and re-launch JetSym before these default settings take effect.

2.12 1024 Functions under JetSym/JetSym ST

JetSym/JetSym ST now supports up to 1024 functions in case the controller's operating system supports the same amount of functions as well. Up to now there were only 256 functions possible.

2.13 Expanded Library Management

The library management has been expanded. For instance all libraries included are now visible in the project tree together with every library's program files.

2.14 Intellisense after unsuccessful Compilation

During the build of the Intellisense selection even in case there is a compiler error, every effort is now made to make complete function selection as good as possible. The Intellisense update in the background has been optimized. It is now type sensitive and offers complete structures like "if….end_if".

2.15 Path of recent Workspaces in Tooltip and Status Bar

The complete path of all recent files available in the "File" menu are displayed in the status bar. Additionally if the path shown as the menu entry is stripped, then a tooltip is displayed when the entry is selected giving the complete path.

2.16 Expanded Function "Save Project As"

The Operation to save a project in another directory offers the possibility to adjust all file names containing the project name to the new project's name. Optionally a copy of all files outside the original project's directory can be created.

2.17 Files Treatment at Project Deletion

At the beginning of a project's deletion all files, which were not created by the project itself, are evaluated and then displayed in one dialog. The user then decides, if they all should be deleted as well or not. In previous version this decision had to be made for every single file.

2.18 Evaluation of PC System Information

In the dialog “About JetSym” there is a new button called “Feedback”. Clicking on it starts an evaluation, where all relevant system information of the computer JetSym is running is gathered and then displayed in a dialog. The content can be copied to the clipboard and then be pasted for instance into the text of an E-Mail to our hotline.

2.19 Installation of several JetSym Versions on one Computer

From this version onwards it is possible to install and run more than one JetSym versions on the same computer. There is only the restriction, that just one JetSym version older than version 4.40 can be installed and run parallel to others. But future versions will all be able to be installed and run parallel to other ones. For more information please refer to the online help.

2.20 New Parameter in Controller Settings

In the controller settings there is a new checkbox called “Online Detection” available. If it is activated the version will be queried from the controller. An error message is displayed on screen in case this evaluation fails because of an offline. If it succeeds the version in the dialog window will be altered accordingly. Because of this new parameter the entry “Automatic” is now removed from the combo box “Version”.

2.21 Progress Display at Operating System Download

The percentage display of the progress in the title bar now considers both progress bars by 50% percent each. In previous versions it was possible that “100%” was displayed several seconds before the download was completed.

2.22 Command “Run as Macro” for Script Files

Script files included in the project can now also be run as a macro using the current JetSym instance.

2.23 File Data of “Modconfig.da”

The data of the file “Modconfig.da” can now be visualized as well as be deleted.

2.24 Expansions in JetSym STX

Command “IsTypeOf” can be used with interfaces as well. There is a new type called “Bit” available. It enables the creation of comfortable bit structures and enumerations, which is very useful for axis control registers as an example. A new system function called “FloatToInt” is introduced with this version as well. It is not allowed to increment pointers anymore and a warning is displayed if a pointer value is used as an array index.

2.25 Adjustable Colors for Source Code between „#ifdef…#endif“

The colors for the text “#ifdef” and “#endif” as well as the source code located between them are now adjustable by the user.

2.26 Reading and Saving MC-Logger Data

It is possible to read and save the MC-Logger data on the precondition, that the controller’s operating system supports this new feature too.

2.27 Improved Program Comparison

The Program Comparison has been improved. So the difference between an “autorun” task and a normal one will be detected for example.

2.28 Completion of an Array Structure

Intellisense is now able to complete an array structure even if a specific index like “ArrayStructure[1].StructureMember” is defined.

2.29 Debugging from the first Program Source Code Line

From this version onwards the program source code can be debugged already from its first line. But it is a controller necessary, whose operating system supports this function as well. Please refer to the online help for more information.

2.30 STD-Libraries with Write Protection

All STD-libraries will now securely be installed with a write protection.

2.31 Verification of Project Names

From this version onwards the project names will be verified, if they are valid or not. For instance it is not allowed to use a controller's name to name a project.

2.32 Controller Selection over Tree Control

In the hardware manager the controller type can now be selected over a tree control. It used to be a combo box before. The controller type "JCOEM-350" is supported from this version onwards.

2.33 Evaluation of Task Status in STX-Program

A new feature the task status can be queried from inside a STX-program. There is also the possibility to programmatically evaluate from inside a function, which task called it.

2.34 Recognition of Floating Point Registers under STX

Up to the previous version the register type (float or int) could only be detected, if it had been located with the "%vl" expression. Now the detection works also with registers located by the "%rl" expression.

2.35 New Command "Copy as Link"

In the context menu of a file symbol in a workspace's file tree, there is a new command "Copy as Link" available. Calling it will put the file's relative path link preceded by the "#include" statement into the clipboard, so it can then be pasted directly into a program file.

2.36 Grouping in Function Tree

The functions in the function tree are now grouped into global and task-local functions. Additionally all functions imported by a library are displayed as well.

2.37 Close all Windows but the Current One

With the help of a new command all MDI windows but the current one can be closed the same way it is implemented in many other editors like Visual Studio.

2.38 Displaying unknown Modules in Hardware Manager

If a module cannot be recognized or assigned by the hardware manager, it is not removed from the display anymore. It now remains visible for the user showing the label “Unknown Module”.

2.39 Correct Display of Classes and Interfaces in Tooltips

In tooltips there is now a clear difference made between “class” and “interface”.

2.40 Lower Priority for Trace Message Outputs

From this version onwards the output of trace messages has a lower priority to prevent JetSym from hanging-up, if messages are thrown high-frequently over a longer period.

2.41 Export of STX Variables

All STX variables can now be exported to the “JDE” file used by JetView to import them. Additionally there is the possibility to export a user-specified range of variables.

2.42 Altered Toolbar Icons

The appearance of a few toolbar icons was changed.

2.43 Change between one and two Monitors

All windows sizes and positions are saved at the JetSym's termination. In case the operator used two monitors and then reopened JetSym with one monitor only all windows previously located on the second monitor are moved back to the visible area.

2.44 Current Versions of Operating Systems

From this version onwards all operating system's update files are available again in the "OS" subdirectory of the path where JetSym is installed.

2.45 Graphical Runtime Analysis

The time frames of each running task organized by the controller's scheduler can now be visualized graphically.

2.46 Folder "External Dependencies"

The folder "External Dependencies" is now updated after every program compilation. This folder can also be included into the search function "Find in Files".

2.47 Renaming in Project Settings Dialog

In the property page "General" of the project settings dialog the label "Intermediate Files" was renamed to "Temporary Files". From this version onwards all ".lst" as well as ".map" files will be created in the output directory and not in the one of the "Temporary Files".

2.48 Set Active Project in all Trees

The active project can be set in all trees over the context menu opened by a right mouse click on the project icon.

3 Eliminated Software Bugs

3.1 Inc-/Decrementing Floating Point Values

Platform: **JetSym Bug-ID #1201**

Values of some floating point registers like some JetMove ones could neither be incremented nor be decremented.

3.2 English Text in German JetSym

Platform: **JetSym Bug-ID #1226**

In the JetSym's German Version the advanced settings dialog of the CAN interface still showed English texts.

3.3 Unhandled Exception in Motion Setup

Platform: **JetSym Bug-ID #1251**

With a certain approach there was the possibility to cause an unhandled exception in the Motion setup. With the introduction of the new motion setup this bug is now fixed.

3.4 Standardization of STXDA File Format

Platform: **JetSym Bug-ID #1265**

STXDA files had a slight different format depending on the way it had been created before.

3.5 Error at Conversion from Motion Wizard to Motion API

Platform: **JetSym Bug-ID #1635**

At the conversion from Motion Wizard to Motion API the controller type was reset to its default value even there had been a STX controller type selected before.

3.6 Type Validation at "Case" Statements

Platform: **JetSym Bug-ID #1677**

The Validation of the constants given with the "Case" statements is now done more restrictively checking for plausibility.

3.7 Function Parameter of Type “Pointer to index of”

Platform: **JetSym Bug-ID #1709**

A function with an input parameter of type “Pointer to index of” was defined. Now the compiler mistakenly threw an error in case above function was called with an integer value as its input parameter.

3.8 Hang-Up during Compilation of big Programs

Platform: **JetSym Bug-ID #1724**

At the compilation end of a big program there was the possibility that JetSym hung-up or became very unstable.

3.9 Not precise Compiler Error Message

Platform: **JetSym Bug-ID #1761**

If the “#include” statement was written the wrong way like “/#include” then the error messages thrown by the compiler were not very helpful to find the location of the incorrect source code.

3.10 Compiler Error Message at Arrays with Size 1

Platform: **JetSym Bug-ID #1762**

If an array of size 1 was defined in the source code (“Array [1..1] of Int”), then the compiler threw the incorrect error message that the second index must be larger than the first one.

3.11 Constants outside Value Range

Platform: **JetSym Bug-ID #1783**

If integer value constants were defined outside the 4 byte range, then the compiler did not throw an error even there was a wrong value taken over in the constant itself.

3.12 Advanced Program Comparison without Confirmation

Platform: **JetSym Bug-ID #1806**

Even the advanced program comparison between controller and PC had been terminated properly; there was no confirmation message visible in the output window at all.

3.13 No Connection to Ethernet Axes

Platform: **JetSym Bug-ID #1807**

Inside a STX project it was impossible to establish a connection to an Ethernet axis over the button “Test”

3.14 Incorrect Display of MC-Controller’s File List

Platform: **JetSym Bug-ID #1809**

Button “Refresh File List” did not work in the “MC-Global” window. Even when new axis data had been added (.ini file) in the meantime, it still was not visible in the list.

3.15 Overlapping in Settings Window of a MC-Axis

Platform: **JetSym Bug-ID #1821**

Inside the JetSym’s German version inside the window, where the settings of a MC-axis were made, the edit box to input the axis ID was overlapped by its own label.

3.16 Option “Save before running Tools”

Platform: **JetSym Bug-ID #1834**

In the property page “Editor” of the dialog opened by “Tools/Options” there is a checkbox labeled “Save before running Tools”. Even if this checkbox was checked, JetSym did not save the files before running a tool.

3.17 No Dirty Bit Sign in Oscilloscope Documents

Platform: **JetSym Bug-ID #1844**

Making certain alterations in the older version of oscilloscope documents did not set the dirty bit sign (*) in the window's title bar.

3.18 Hang-Up of JetSym

Platform: **JetSym Bug-ID #1854**

An active setup was communicating with a controller of type "JCM-350" over CAN interface. Now editing a program file could hang-up JetSym completely, so it could be closed only by aborting the process using the windows task manager.

3.19 File Save during Project Build

Platform: **JetSym Bug-ID #1860**

Up to now it was possible to save file changes during the build of a project. From now on this is prevented because of some nasty side effects occurred in the past.

3.20 No Overlapping in MAP File

Platform: **JetSym Bug-ID #1897**

Overlapping of localized variables defined in the same class mistakenly was not listed in the MAP file.

3.21 Troubles with Motion Wizard during Compilation

Platform: **JetSym Bug-ID #1926**

Opening the Motion Wizard during the compilation progress occasionally caused a JetSym program crash. From this version onwards the motion wizard is disabled during such a build.

3.22 Errors at Conversion ST->STX

Platform: **JetSym Bug-ID #1932 + #1954 + #1980 + #1981 + #1982**

After a project was converted from JetSym ST to JetSym STX the structure of the nodes below "Network" were different between the original and the converted project. Functions defined with forward declarations appeared twice. After converting the expression "When Not Test > 0 Then continue" the compiler threw an error message because the Boolean expression after "Not" needs to be surrounded by brackets in STX code language. From this version onwards a warning message will already be given at conversion time already. If there was a commentary placed after a "case" statement in the JetSym ST project, then the conversion program placed the "break" statement mistakenly right after the comment. After the conversion from Motion Wizard to Motion API the source code created was unable to be compiled successfully.

3.23 Controller selected over CAN Scan was not take over

Platform: **JetSym Bug-ID #1939**

After controller had been selected with the help of the scan function over the CAN interface, the new interface settings were not taken over in an active setup window.

3.24 Errors at Conversion JetSym->ST

Platform: **JetSym Bug-ID #1955 + #1956**

Constants for Task numbers used in “REGISTER_LOAD” commands were mistakenly converted to type “int”. There were also problems in case of the source code between “#ifdef…#endif” contained programming errors.

3.25 Misbehavior at Controller Type Selection

Platform: **JetSym Bug-ID #1957**

If the controller type selection in the hardware manager was aborted by pressing the ESC key while the combo box was open, then the currently selected controller type was taken over mistakenly.

3.26 JetSym Crash in Oscilloscope Window

Platform: **JetSym Bug-ID #1964**

Changing the colors of the grid, frame or background in an oscilloscope document of older version could end up in a JetSym crash. All changes not saved before were then lost.

3.27 New Window Operation with “CPU”

Platform: **JetSym Bug-ID #1964**

Some special windows like “CPU” in the hardware manager are not allowed to be opened several times, because this could cause exception failures. From this version onwards the command “New Window” of menu “Window” will be disabled for these window types.

3.28 No Update of Function Tree

Platform: **JetSym Bug-ID #1968 + #1969**

After the execution of the “Rebuild All” command the function tree was not updated. If the user then double-clicked on the symbol of a function which had been removed before,

then an exception error was thrown. The same could happen during an automatic Intellisense update.

3.29 Deleting a Project in Conjunction with Subversion

Platform: **JetSym Bug-ID #1971**

Even the user aborted the progress of a project deletion successfully; some important subversion files were deleted.

3.30 Axis Type Change

Platform: **JetSym Bug-ID #1977 +#1978**

The change of an axis type was not taken over immediately by refreshing the window accordingly. Before it took effect the window needed to be closed and reopened first. Change the axis type caused also the effect, that some parameters were set to value “-1”. After a followed transmission to the axis module it was not possible to start it correctly anymore.

3.31 Incorrect Selection in Intellisense

Platform: **JetSym Bug-ID #1979**

A certain approach could case Intellisense to display a complete wrong selection list.

3.32 Incorrect Declaration of wrong Program Line

Platform: **JetSym Bug-ID #1985**

If a motion command followed a “LIMITS” one and a wrong parameter was entered inside the motion command, then the compiler showed a wrong number of the faulty program line.

3.33 JetSym Crash inside Program Editor

Platform: **JetSym Bug-ID #1999**

If a structure contained a member with the same name as a system function like “pos”, “display_text”, and so on and if the “expression” array was selected from the Intellisense’ s selection list, then JetSym terminated unexpectedly.

3.34 Update Interval in Motion Setup

Platform: **JetSym Bug-ID #2007**

The change of the motion setup's update interval did not take effect immediately. The setup window needed to be closed and reopened first.