



JetSym

Version Update from V. 5.2.1 to V. 5.3.0

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Revision 1.00

November 2016 / Printed in Germany

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1 Introduction

Overview Version 5.3.0

The following table gives an overview of newly added or enhanced features and fixed software bugs:

Function	New	Enhanced	Fixed
Static variables in the context of functions	✓		
Evaluation of expressions added to Sizeof()	✓		
Support of types in types (struct, enum)	✓		
Shortcut menus for the download of hardware configuration files have been removed	✓		
Project wizard provides support in creating new projects	✓		
Marking up of write-protected or non-existing files	✓		
Build output shows controller memory usage	✓		
Transfer of program files: Availability of libraries used	✓		
Marking up of inactive program files	✓		
Transferring time and date from PC to controller	✓		
New controller JC-945MC	✓		
Access to the controller's file system	✓		
Warning against non-active configuration during connection test	✓		
Revised dialog "Scan Hardware"	✓		
Communication with the controller only for visible lines in Setup window	✓		
Program download: Displaying the type and address of the target controller	✓		
Displaying an inactive project in monitor window	✓		
Motion API v2.0 for JX4 systems	✓		
Compiler message in the case of invalid TimerStart parameters	✓		
IntelliSense support for nested and implicit types	✓		
Improved search for references in program editor	✓		
Error message when variables are declared with structures with objects in elements	✓		
Adjustable column width in Module Setup	✓		
In Module Setup, write-protected boxes are visible in online mode	✓		
Binary notation in Module Setup	✓		
Improved representation of bit-coded registers in Module Setup	✓		
Cloaked Setup and Monitor windows should not poll data in online mode	✓		
Product selection when configuring the CPU	✓		
Improved performance in Module Setup	✓		

Function	New	Enhanced	Fixed
Creating or deleting a breakpoint by simply clicking the mouse	✓		
Polling of values in monitor is prevented during program relaunch	✓		
Line wrap is now supported at saving XML-formatted JetSym files	✓		
Product names are now displayed in the hardware tree	✓		
Limited length of project and program file name	✓		
Interface-specific default settings	✓		
DateTime can be selected as types in Setup	✓		
Warning in the case of stack overflow	✓		
Time stamp in program file	✓		
Start & Debug	✓		
Types have been added to the GoTo bar	✓		
Ethernet axes in combination with JV-10xx	✓		
New MC axis type "Shadow Axis"	✓		
Enhanced CPU configuration: "Reset remanent parameters"	✓		
The folder "Axes" has been renamed to "Unassigned Axes"	✓		
Preview pane in renaming identifiers	✓		
MC axis type "External Axis"	✓		
Compiler error message at localizing a variable using a constant	✓		
Oscilloscope, device-internal mode: Support of Ethernet axes	✓		
Background color indicates program checksum differences	✓		
Formatting the flash disk of the controller	✓		
Setup pages for IO modules	✓		
Using BITS type for calculations in STX	✓		
Compiler error if pointers are compared with constant values unequal to zero	✓		
STX command "Dir" lists files in a directory	✓		
Trace point support	✓		
Opening a DA file following upload is now optional	✓		
Setup pages for Ethernet axes have been added	✓		
Revised module selection for oscilloscope recordings in device-internal mode	✓		
Assigning names to modules in STX projects	✓		
Program editor: Line number are activated by default	✓		
Outputting overlaps for %xl in the map file	✓		
Line comments behind constants, type declarations and class variables are displayed in tooltip	✓		
Improved performance in monitor window	✓		

1 Introduction

Function	New	Enhanced	Fixed
Value selection wizard for JX3 modules and (MC-)JM-2xx servo amplifiers	✓		
Updated sample programs	✓		
Kp recalculation after making changes to PWM frequency	✓		
Compatibility check for included libraries	✓		
Displaying the controller memory usage	✓		
Variables displayed on IO setup pages	✓		
New Motion API v1.0.0.10, and v1.0.0.11	✓		
Process data page for JX3-BN-ETH	✓		
PWM frequency and speed settings check	✓		
Comment field in oscilloscope	✓		
Tooltip for variables in Setup with line comments	✓		
Shortcut for "Rebuild All"	✓		
Updated motor database	✓		
Displaying the MC version at connection test using the button "Test"	✓		
Data loss warning in the case of implicit type conversion			✓
Error at resolving a double			✓
Variable declaration with & operator may lead to an unexpected result			✓
Debugger: Improved behavior of conditional breakpoints in the case of renamed tasks			✓
Controller crashed at executing certain operations			✓
CPU picklist not sorted in alphabetical order			✓
"Go to Definition" does not work for tasks and subroutines			✓
Inconsistencies upon making changes to controller settings in Online mode			✓
Error due to an open file following restart			✓
JDE export takes extremely long when module headers are used			✓
N_COPY_FROM: Register numbers limited to 16 bits			✓
Setup/declaration file: Setting the column width to its optimum value does not always work			✓
Incorrectly placed selection box			✓
Scanning CAN controllers in online mode not allowed			✓
Problems in evaluating expressions in monitor mode			✓
Missing semicolon could result in subsequent errors			✓
Axis parameters are not applied as offline parameter set			✓
Incorrect PWM frequency recommendation upon motor selection			✓
Incorrect line comment on a variable upon automatic IntelliSense update.			✓

Function	New	Enhanced	Fixed
Crash in online mode if no workspace was opened			✓
Position of frame around the active document is not always correct			✓
Missing check at renaming identifiers			✓
Copying symbol editor lines between different JetSym versions			✓
Expanding structures in split Setup windows does not work			✓
STX compiler crashed			✓
Read and write access to individual bits of byte- and word-variables does not work			✓
Incorrect message upon program comparison if the mode selector on the controller is in position STOP.			✓
Upon triggering an OS update, the controller could still be restarted by clicking the button "Restart"			✓
Program starts up despite exception in a constructor of a global instance			✓
The functions "Find Identifier" or "Replace Identifier" did not find macro parameters			✓
MotionLoadParameter for JC-310-JM does not work			✓
Updating the controller parameters following motor selection			✓
Incorrect tooltip in Motion Setup for MC axes			✓
Hardware scan: Invalid IP address mask caused an error			✓
Endlessly expanding folders in the file system of a controller equipped with a USB flash drive			✓
ST projects: Monitor tab "Tasks" does not show any tasks			✓
Ethernet axes on a JC-365 can not be selected in Osci Motion Wizard			✓
Unexpected error message in dialog "Compare and Download"			✓
GNNs of Ethernet axes get lost when the user switches from one controller to another			✓
Oscilloscope: .csv files with ";" as separator could not be re-read			✓
Parameter info was not displayed			✓
Incorrect interface type upon selection of a scanned controller			✓
Missing files in zipped workspace (.zip file)			✓
Automation interface: Crash at terminating JetSym if "JetSymAutoBuild.exe" is used			✓
Compiler error upon switching the MC-JM600 axis type			✓
STX compiler: Arbitrary issuing of error message			✓
Crash at loading a program file			✓
Uploading files in file explorer			✓
Incorrect cursor position in oscilloscope			✓
Bug in RegString assignment			✓

1 Introduction

Function	New	Enhanced	Fixed
Monitor: Failure to display fields or properties for references			✓
ST projects: Problem with online version detection			✓
Sample program "AutoBuild": JetSym may hang in the state "No response"			✓
Timeout for Ethernet axes can be specified separately			✓
Oscilloscope: Occasional dropouts at recording in Live Mode (in continuous recording mode)			✓
Error when loading legacy projects			✓
Oscilloscope: When the STX VM window (virtual controller) was closed and then re-opened, JetSym failed to continue recording data irrespective of the fact that the controller was running			✓
Upon closing and re-opening a workspace, JetSym failed to re-open an open MC global window			✓
Incorrect information displayed in Module Setup			✓
JetSymST or JetSym projects: Array index check in Setup			✓
Failure to update the file status of Setup files			✓
Incorrect assignment of task numbers during IntelliSense update			✓
Missing parameter information in Tooltip			✓



2 New features

Introduction

Below, all features that are new in this version, as well as the enhancements are listed.

2.1 Marking up of write-protected or non-existing files

Workspace

In the workspace write-protected files are marked up with the symbol  and non-existing files with the symbol .

2.2 Marking up of inactive program files

Workspace

The type symbol of program files which are not integrated by a program using the #include instruction is grayed out in the workspace. This feature applies to STX projects only.

2.3 Shortcut for "Rebuild All"

Workspace

The function "Rebuild All" can be triggered with the keyboard shortcut CTRL+F7.

2.4 Transfer of program files: Availability of libraries used

Library management

Along with this JetSym version, all versions of libraries released within the framework of installations (e.g. Motion API) will be installed on the computer. This will help to avoid that libraries must be installed separately once they are used. If in a workspace a library is used which is not installed, the program issues a message. Now, you are given the choice to use the latest installed version of this library, or to install the missing library from an external source.

2.5 Warning against non-active configuration during connection test

CPU configuration

On clicking the "Test" button, the results dialog will inform the user if the configuration used for the connection test was not the active one.

2.6 Product selection when configuring the CPU

CPU configuration

Several products might be equipped with the same CPU. Therefore, the box "CPU" has been replaced by "Product" in the CPU configuration dialog. The corresponding CPU is shown as additional information.

2.7 Creating or deleting a breakpoint by simply clicking the mouse

Debugger

A breakpoint can be set or removed by pressing the CTRL key and clicking with the mouse the corresponding line in the left vertical margin of the program editor.

2.8 Start & Debug

Debugger

During debugging, menu item "Restart" from menu "Debug" lets you restart the control program and debug it from the beginning. This feature is very helpful, if you are looking for an error that occurs at the very beginning. Download & Debug is no longer necessary.

2.9 Trace point support

Debugger

Tracepoints have been added to the breakpoint functionality. Unlike breakpoints, tracepoints do not cause the program flow to stop. They only cause trace messages to be issued. The format of such trace messages can be defined by the user by means of predefined macros (e.g. for outputting variable values).

2.10 Shortcut menus for the download of hardware configuration files have been removed

Hardware Manager

The shortcut menus for downloading individual hardware configuration files have been removed and replaced by the dialog "Compare and Download". This dialog can be reached via shortcut menu for the hardware configuration in the hardware tree.

2.11 Transferring time and date from PC to controller

Hardware Manager

The controller's enhanced configuration page lets you transfer time and date information from PC to controller.

2.12 New controller JC-945MC

Hardware Manager

Hardware manager now supports JC-945MC as a new controller type.

2.13 Access to the controller's file system

Hardware Manager

This version lets you copy individual or several files located in the controller's file system from the controller to the local PC using Drag&Drop or the shortcut menu.

2.14 Revised dialog "Scan Hardware"

Hardware Manager

The "Scan Hardware" dialog has been reduced to two tree views: "Scanned Hardware" and "Current Hardware". Scanned hardware can be included into the current hardware configuration using Drag-and-Drop or the corresponding buttons. Compatible and incompatible pieces of hardware are displayed in different colors which supports you in making the correct selection.

2.15 Product names are now displayed in the hardware tree

Hardware Manager

In the hardware tree, the controller node with its product name and the CPU node with its CPU type are displayed.

2.16 Ethernet axes in combination with JV-10xx

Hardware Manager

Hardware Manager now lets you configure Ethernet axes in combination with a JV-10xx.

2.17 New MC axis type "Shadow Axis"

Hardware Manager

The shortcut menu of the "Motion Control" node in the hardware tree lets you create MC axes of the type "Shadow Axis". A shadow axis is sort of a virtual axis with another MC axis serving as basis for its position values. Typically, shadow axes are used to implement cascaded technology groups. A shadow axis is the leading axis in the lower-level technology group. It gets its position data from a following axis of the higher-level group.

2.18 Enhanced CPU configuration: "Reset remanent parameters"

Hardware Manager

The feature "Reset remanent parameters" has been added to CPU configuration. Once this feature has been executed, the controller must be restarted.

2.19 The folder "Axes" has been renamed to "Unassigned Axes"

Hardware Manager

The folder "Axes" which holds all axes that are no longer available following a switch from one controller to another has been renamed to "Unassigned Axes".

2.20 MC axis type "External Axis"

Hardware Manager

Hardware Manager lets you create MC axes of the type "External Axis" and assign parameters to them. A description of the differences in creating external axes in a JX2 or JX4 system can be found in the JetSym Help.

2.21 Formatting the flash disk of the controller

Hardware Manager The advanced configuration dialog in the CPU window lets you format the flash disk of the controller.

2.22 Assigning names to modules in STX projects

Hardware Manager By analogy with axes, JetSym now support assignment of names to other modules in STX projects. These names must be unique within the project. The module names are listed in the hardware tree along with their module type.

2.23 Displaying the controller memory usage

Hardware Manager The CPU configuration page lets you read out the usage of controller memory. The memory usage can be displayed as diagram.

2.24 Displaying the MC version at connection test using the button "Test"

Hardware Manager If the connection test by means of the button "Test" was successful, JetSym displays the MC version for MC controllers and the JetVM version for STX controllers.

2.25 IntelliSense support for nested and implicit types

IntelliSense IntelliSense now supports nested and implicit types.

2.26 Adjustable column width in Module Setup

Module Setup In Module Setup the column width can be adjusted by the user.

2.27 In Module Setup, write-protected boxes are visible in online mode

Module Setup In Module Setup, write-protected boxes are shown with a slightly darker background color in online mode.

2.28 Binary notation in Module Setup

Module Setup In Module Setup, applicable registers are now displayed in hexadecimal notation, as IP address or in binary notation.

2.29 Improved representation of bit-coded registers in Module Setup

Module Setup In Module Setup, for bit-coded registers the corresponding bit number is displayed in the tool tip.

2.30 Improved performance in Module Setup

Module Setup In Module Setup, data are now displayed faster. This has been achieved by bundling visible registers at reading data from the controller.

2.31 Setup pages for IO modules

Module Setup For IO modules, setup pages have been introduced which allow for reading inputs and set outputs.

2.32 Setup pages for Ethernet axes have been added

Module Setup In Hardware Manager, setup pages for the OEM controller have been added to the configuration pages for Ethernet axes. This lets you access registers on the OEM controller.

2.33 Variables displayed on IO setup pages

Module Setup On IO setup pages, for each input and output the corresponding program variables are displayed, if declared.

2.34 Process data page for JX3-BN-ETH

Module Setup A process data page has been added to the JX3-BN-ETH module setup. This page shows the publisher/subscriber variables which are cyclically exchanged between controller and JX3-BN-ETH.
As part of this measure, cycle time and network ID configuration of publisher data frames has also been simplified and can now be made on the process data page.

Important note: Only one publisher or subscriber is supported per JX3-BN-ETH. The data which are to be exchanged cyclically are automatically defined, based on the configured JX3 modules. To ensure the defined cycle times, creation of additional publishers and subscribers with user-defined registers is no longer supported for newly created projects. If on loading a legacy project the message "JX3-BN-ETH not compatible" appears on the JX3-BN-ETH process data page, delete the JX3-BN-ETH from the hardware configuration and create it anew.

2.35 Displaying an inactive project in monitor window

Monitor

So far, the monitor window only showed that the program was not identical with the program in the controller, even if the values displayed in the monitor did not belong to the current project. This was more confusing than helpful to the user. Now, the monitor window header shows in brackets behind the project name, if the displayed project is not the active one.

2.36 Polling of values in monitor is prevented during program relaunch

Monitor

So far, the monitor continued to update values even during program relaunch. This could cause problems in assigning correct addresses.

2.37 Improved performance in monitor window

Monitor

The performance in expanding structures and arrays has significantly been improved.

2.38 New Motion API v1.0.0.10, and v1.0.0.11

Motion API v1.0

Detailed information on changes made to Motion API 1.0.0.10 and Motion API 1.0.0.11 can be found in JetSym Help.

2.39 Motion API v2.0 for JX4 systems

Motion API v2.0

There is a new Motion API 2.0 (Beta) for JX4 systems.

2.40 Kp recalculation after making changes to PWM frequency

Motion Setup

When the user makes changes to the PWM frequency in Motion Setup, a dialog opens asking whether the Kp value of the current controller should be recalculated and set anew.

2.41 PWM frequency and speed settings check

Motion Setup

If the PWM frequency setting does not correspond to the recommended value or if discrepancies in speed settings are detected, in Motion Setup, a warning triangle is displayed in the button "Check...". When you click this button, a dialog opens that lets you check and adjust PWM frequency, or speed settings.

2.42 Updated motor database

Motion Setup

The motor database of Motion Setup has been updated and new models have been added.

2.43 Updated sample programs

Online Help

The JetSym sample programs have been revised.

2.44 Interface-specific default settings

Options dialog

Regarding the connection between JetSym and the controller, the Options dialog lets you define interface-specific default settings for different interface types. These default values will be used in recreating a project or in switching interfaces.

2.45 Oscilloscope, device-internal mode: Support of Ethernet axes

Oscilloscope Ethernet axes of the types JM-200-ETH, JC-310-JM, and JM-2xx-OEM can now be selected from the module selection tree in device-internal mode (former "compatible mode").

2.46 Revised module selection for oscilloscope recordings in device-internal mode

Oscilloscope With STX projects, modules for device-internal oscilloscope mode (former "compatible mode") are selected from a hardware tree. Modules which do not support device-internal oscilloscope mode and are, therefore, not available for selection are grayed out.

2.47 Value selection wizard for JX3 modules and (MC-)JM-2xx servo amplifiers

Oscilloscope As an alternative to specifying register numbers, there is a wizard offering a defined, module-specific selection of values to be recorded in device-internal oscilloscope mode.

2.48 Comment field in oscilloscope

Oscilloscope A tab has been added to the oscilloscope window. Here, comments can be entered. These comments will be stored to the oscilloscope file.

2.49 Program download: Displaying the type and address of the target controller

Program download During program download the output window displays the type and the IP address of the target controller.

2.50 Improved search for references in program editor

Program editor Several language properties have been added to improve search for references in program editor.

2.51 Types have been added to the GoTo bar

Program editor A picklist in the upper part of the program editors lets you navigate to the type declarations of a program document.

2.52 Preview pane in renaming identifiers

Program editor When you select in Source Editor an identifier, click menu item "Rename identifier" and confirm the dialog with the new identifier name, a preview pane appears showing all matches in the source files. If you confirm the dialog, all matches are renamed. At this time, you are still able to cancel this process.

2.53 Program editor: Line number are activated by default

Program editor The default for displaying line numbers in text editor has been set to "ON" (so far it was "OFF").

2.54 Line comments behind constants, type declarations and class variables are displayed in tooltip

Program editor As of now, in tooltip line comments on constants, type declarations and class variables are displayed.

2.55 Line wrap is now supported in saving XML-formatted JetSym files

Project settings Now, XML-formatted JetSym files can now be saved with their lines wrapped (so far in parts, only one line per file). This is to support comparison using diff tools. For backward compatibility with JetSym versions before 5.2 you can set in Options that files are saved in the former (single-line) format (backward compatibility applies only to variable declaration files).

2.56 Warning in the case of stack overflow

Project settings The stack size of functions or tasks causing the compiler to issue a warning has been reduced to 4096 bytes. This reduction increases safety in designing programs.

2.57 Project wizard provides support in creating new projects

Project management The project wizard which supports the user in creating new projects has completely been revised. Now, you can select the project type, as well as the corresponding controller. Furthermore, JetSym lets you include libraries depending on the selected controller.

2.58 Limited length of project and program file name

Project management Now, names of projects and program files are limited to 60 characters. Longer names could cause problems in the file system of the controller.

2.59 Communication with the controller only for visible lines in Setup window

Setup Only visible lines in the Setup window are updated in online mode.

2.60 DateTime can be selected as types in Setup

Setup JetSym lets you select DateTime as type in Setup. Date and time are displayed according to the country settings.

2.61 Background color indicates program checksum differences

Setup If the checksum of the local program and the program on the controller differs, the background color of the column heading "Number" turns red in online mode.

2.62 Tooltip for variables in Setup with line comments

Setup A tooltip can be displayed showing the variable declaration and the line comment. This feature is comparable with the tooltip in program editor.

2.63 Cloaked Setup and Monitor windows should not poll data in online mode

Setup and Monitor Setup and Monitor windows no longer communicate with the controller when they are cloaked.

2.64 Compiler message in the case of invalid TimerStart parameters

STX compiler This feature has been added to the TimerStart function.

2.65 Static variables in the context of functions

STX compiler The programming language STX now lets you create static variables in the context of functions.

2.66 Evaluation of expressions added to Sizeof()

STX compiler Sizeof() is now able to calculate the size of structure elements or array indices. This allows for greater flexibility in programming.

2.67 Support of types within types (struct, enum)

STX compiler There are the so-called implicit type declarations, such as enumerations in classes or structures. To be able to use these types, the full path of the type must be specified. So far, the compiler did not understand this path specification throughout the entire program. Now, type locations are now supported everywhere in the program, even where a simple type name was expected in the past.

2.68 Build output shows controller memory usage

STX compiler

Once the program has been compiled, JetSym shows how much (in percent) of the available memory on the controller is used up by the program.

2.69 Error message when variables are declared with structures with objects in elements

STX compiler

In hardware structures there are fields which may be located outside the structure. For such cases, there is an extra declaration using offset. However, using a structure defined this way in the memory may cause fatal errors. If this is the case, the compiler now issues an error message.

2.70 Time stamp in program file

STX compiler

A time stamp comprising date and time has been added to the metadata of the program file. The STX compiler enters into this time stamp the time when the program was compiled. STX lets you access the time stamp information using the function `DateTimeBuilt()` with return type `DateTime`. Variables of the type `DateTime` can be displayed in `Setup` for example.

2.71 Compiler error message at localizing a variable using a constant

STX compiler

The compiler issues an error message if the user localizes a variable in the memory using an address instead of a constant.

2.72 Using BITS type for calculations in STX

STX compiler

While, mathematically speaking, it would not seem reasonable to use flag variables in calculations it may be useful in some cases. Now, the compiler does not issue an error message when they are used.

2.73 Compiler error if pointers are compared with constant values unequal to zero

STX compiler

The STX compiler issues a warning if a pointer is compared with a constant value unequal to zero.

2.74 STX command "Dir" lists files in a directory

STX compiler

The new command "Dir" has been added to STX. This command lists all files in a directory. It also supports filtering of files according to specific criteria.

2.75 Outputting overlaps for %xl in the map file

STX compiler

Overlaps in the %xl area are output in the map file. Furthermore, the compiler issues warning messages even if no map file is created.

2.76 Compatibility check for included libraries

STX compiler

For libraries (libpackages) which are shipped with the JetSym installation the compiler issues a warning if one of the included libraries is not compatible with the target controller.

2.77 Opening a DA file following upload is now optional

DA file upload

An option has been added to the DA file upload dialog. This option lets the user define whether the DA file is to be opened automatically following upload or not.

3 Fixed software bugs

Introduction This chapter describes the software bugs which have been fixed in the new software release.

Data loss warning in the case of implicit type conversion

Error description The compiler issues comprehensive warning messages if at assigning different data types the value range of the target variable could be exceeded, e.g. <byte> := <word>.

Remedy/workaround

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Error at resolving a double

Error description Float values may now have up to 15 pre-decimal places. To prevent the compiler from issuing a "Range exceeded" message float values of such a length must explicitly be flagged (using .0 or e in the case of exponential notation).

Remedy/workaround

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Variable declaration with & operator may lead to an unexpected result

Error description Now, the compiler checks variable declarations in more detail to prevent accidental errors at localizing or overlapping variables. However, the user should use overlapping carefully.

Remedy/workaround

Debugger: Improved behavior of conditional breakpoints in the case of renamed tasks

Error description Making changes to a task name in program text could render a conditional breakpoint unnoticedly ineffective. Now, the corresponding breakpoint is disabled and a message is issued.

Remedy/workaround -

Controller crashed at executing certain operations

Error description In the case of some mathematical system functions, certain (illegal) borderline cases were not handled properly and could cause the controller to crash. This problem is fixed now.

Remedy/workaround -

CPU picklist not sorted in alphabetical order

Error description The CPU picklist in the "Options" dialog was not sorted in alphabetical order.

Remedy/workaround -

"Go to Definition" does not work for tasks and subroutines

Error description The command "Go to Definition" proved ineffective in tasks and subroutines.

Remedy/workaround -

Inconsistencies upon making changes to controller settings in Online mode

Error description In Online mode, changes to controller settings made from an opened module setup were not properly processed.

Remedy/workaround -

Error due to an open file following restart

Error description A file could remain open if a download had canceled program execution at an inappropriate moment. During the subsequent restart of the program error messages were displayed because the file could not be accessed.

Remedy/workaround -

JDE export takes extremely long when module headers are used

Error description Variables which have been declared in a platform file are no longer written to the JDE file. Export comprises only variables the data type of which has been declared by the user, or corresponds to a base type.

Remedy/workaround -

N_COPY_FROM: Register numbers limited to 16 bits

Error description The compiler issues an error message if in an ST project N_COPY_FROM is used with register numbers exceeding 16 bits.

Remedy/workaround -

Setup/declaration file: Setting the column width to its optimum value does not always work

Error description If a table of a setup or declaration file is zoomed in using CTRL + mouse wheel, setting the column width to its optimum value (by double-clicking the column separator in the column header) does not work properly.

Remedy/workaround Adjust the column width manually.

Incorrectly placed selection box

Error description When opening the type selection box in Setup for user-defined data in Hardware Manager it was placed incorrectly if the window position had been changed beforehand.

Remedy/workaround Re-open the selection box.

Scanning CAN controllers in online mode not allowed

Error description Scanning connected CAN controllers on the CPU side of the Hardware Manager does not work reliably. Therefore, scanning in online mode is no longer allowed.

Remedy/workaround Terminate online mode, then press the Scan button.

Problems in evaluating expressions in monitor mode

Error description If in monitor mode an expression comprised access to additional variables, it could happen that JetSym failed to display the value of the entire expression.

Remedy/workaround -

Missing semicolon could result in subsequent errors

Error description A missing semicolon behind a task forward declaration could result in wrong address inquiries for subsequent variable declarations.

Remedy/workaround Rebuild all.

Axis parameters are not applied as offline parameter set

Error description Upon saving axis parameters in Motion Setup, these parameters were not applied in online mode as offline parameter set even if option "Keep last offline parameter set" was activated.

Remedy/workaround -

Incorrect PWM frequency recommendation upon motor selection

Error description Upon motor selection it could happen that an incorrect PWM frequency of 16 kHz was recommended.

Remedy/workaround Ignore the recommendation and set the correct PWM frequency on the amplifier side in Motion Setup.

Incorrect line comment on a variable upon an automatic IntelliSense update.

Error description Upon an automatic IntelliSense update it could happen that the line comment on a variable was incorrectly displayed.

Remedy/workaround Rebuild all.

Crash in online mode if no workspace was opened

Error description	If a setup file with one or several variable was opened, it could happen that JetSym crashed if no workspace was open (the preset controller was used) and the user activated online mode.
Remedy/workaround	-

Position of frame around the active document is not always correct

Error description	The position of the dashed frame showing in Hardware Manager the active hardware document was not always correct.
Remedy/workaround	Activate another document by clicking the corresponding tab. Then return to the original tab.

Missing check at renaming identifiers

Error description	At renaming identifiers, it was possible in some cases to use the same name as target. The dialog did not prevent the user from doing so.
Remedy/workaround	Enter a different name as target identifier.

Copying symbol editor lines between different JetSym versions

Error description Lines from symbol editor of an older JetSym version could not be copied to the symbol editor of a newer version.

Important note: Only JetSym version 5.3.0 or higher will support copying from a newer version to an older one.

Remedy/workaround

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Expanding structures in split Setup windows does not work

Error description Structures or arrays could not be expanded by clicking "+" if they were displayed in both panes of a horizontally split Setup window (*.stxs file).

Remedy/workaround

Make the line to be expanded invisible by scrolling it out of the visible area in the other pane of the split window.

STX compiler crashed

Error description Under the following circumstances the compiler could crash: If you implement in a class an interface which has been derived several time and you forget to implement a method of one of the inherited interfaces.

Remedy/workaround

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Read and write access to individual bits of byte- and word-variables does not work

Error description Read and write access to individual bits in the case of variables of the type byte or word did not work.

Remedy/workaround -

Incorrect message upon program comparison if the mode selector on the controller is in position STOP.

Error description If a comparison of programs is carried out although the controller program has not yet been loaded (e.g. because the mode selector is in position STOP), JetSym issues the incorrect message that the programs are not identical. Now, JetSym issues the message that the programs can not be compared.

Remedy/workaround ---

Upon triggering an OS update, the controller could still be restarted by clicking the button "Restart"

Error description Now, an error message appears if you click other buttons of this dialog while an OS update is running.

Remedy/workaround Do not click any other buttons during OS update.

Program starts up despite exception in a constructor of a global instance

Error description The exception caused the constructor to be aborted and prevented execution of other constructors. This bug has been fixed. The program does not start up following such an exception.

Remedy/workaround -

The functions "Find Identifier" or "Replace Identifier" did not find macro parameters

Error description Variables which are used as parameters in macros were not found or replaced by the function "Find Identifier" or "Replace Identifier".

Remedy/workaround -

MotionLoadParameter for JC-310-JM does not work

Error description The MotionWizard command MotionLoadParameter for JC-310-JM tried to load the parameter file DA_-200012000.da instead of the file DA_-12000.da.

Remedy/workaround Rename the parameter file manually.

Updating the controller parameters following motor selection

Error description The updating procedure of controller parameters following motor selection has been revised. If the dialog "Check" recommends a different PWM frequency, you can change the frequency right here in the dialog even before the current controller Kp is calculated. In addition, the current limitation is updated in online mode by analogy with offline mode.

Remedy/workaround -

Incorrect tooltip in Motion Setup for MC axes

Error description On the status page for R100.11 the tooltip in Motion Setup for MC axes showed an incorrect reference to Motion API.

Remedy/workaround -

Hardware scan: Invalid IP address mask caused an error

Error description An invalid IP address mask (e.g. 0.0.0.0) entered in the dialog "Scan Hardware" resulted in an error.

Remedy/workaround -

Endlessly expanding folders in the file system of a controller equipped with a USB flash drive

Error description In the file system of a controller equipped with a USB flash drive the folder names "." and ".." were displayed. Clicking on them caused the current folder or parent folder to be displayed once more. This could result in an endlessly expanding folder tree. The file system does no longer show the a.m. folders.

Remedy/workaround Do not expand the folders "." and "..".

ST projects: Monitor tab "Tasks" does not show any tasks

Error description With ST projects, the monitor did not show any tasks on the tab "Tasks".

Remedy/workaround -

Ethernet axes on a JC-365 can not be selected in Osci Motion Wizard

Error description The query mode did not support selection of Ethernet axes for the controller types JC-365 and JC-365MC.

Remedy/workaround -

Unexpected error message in dialog "Compare and Download"

Error description When the user switched from a project involving an MC controller to a controller without MC, it could happen that the dialog "Compare and Download" showed the unexpected error message that this controller does not support MC objects.

Remedy/workaround -

GNNs of Ethernet axes get lost when the user switches from one controller to another

Error description When the user switched between controllers the GNNs of Ethernet axes were not maintained, but new GNNs were assigned.

Remedy/workaround Upon switching from one controller to another, enter the GNNs of Ethernet axes manually.

Oscilloscope: .csv files with ";" as separator could not be re-read

Error description Jet Sym was not able to load into a JetSym oscilloscope file ".csv" files using ";" as separator created by means of the shortcut menu in a JetSym oscilloscope file.

Remedy/workaround -

Parameter info was not displayed

Error description Tooltip did not always show parameter information.

Remedy/workaround -

Incorrect interface type upon selection of a scanned controller

Error description When in CAN Interface wizard one of the scanned controller was selected, the interface type was set by mistake to "Ethernet" instead of "JetCAN" (only if the product type changed as a result of the scan).

Remedy/workaround Enter "JetCAN" as interface type.

Missing files in zipped workspace (.zip file)

Error description It could happen that the .zip file of a workspace did not include all required files if these files were located in different directories of the drive.

Remedy/workaround -

Automation interface: Crash at terminating JetSym if "JetSymAutoBuild.exe" is used

Error description Using "JetSymAutoBuild.exe" (from the "Samples" directory) could cause JetSym to crash. In "JetSymAutoBuild.exe" the sequence "CloseWorkspace(...)" is called up, then "Quit()". This sequence could cause a crash even if the automation interface was explicitly used.

Remedy/workaround -

Compiler error upon switching the MC-JM600 axis type

Error description Switching in an ST project with Motion Wizards between MC-JM600 axis types could result in compiler errors upon switching the axis type.

Remedy/workaround -

STX compiler: Arbitrary issuing of error message

Error description STX compiler by mistake issued an error message if a "protected static" variable was accessed specifying the keyword "base".

Remedy/workaround Do not use the keyword "base" in front of the variable or declare the variable as "public".

Crash at loading a program file

Error description If at downloading a program file to an STX controller, the user selected an ST program file in the download dialog by mistake, JetSym crashed.

Remedy/workaround If possible, do not set the filter to "All files". If this is not possible, make sure not to select .ejx files.

Uploading files in file explorer

Error description At uploading files in file explorer, JetSym did not check the target directory for existing files. Now, JetSym opens a dialog box if at least one of the target file already exists. If desired, the whole upload process can be canceled here.

Remedy/workaround -

Incorrect cursor position in oscilloscope

Error description If in oscilloscope the "PROFILER" channel was used, the measurement cursors could not be placed to the desired, correct position by clicking the mouse button.

Remedy/workaround -

Bug in RegString assignment

Error description At the end of a RegString the remaining memory area should be set to zero. This did not work for even string lengths. In practice, this causes problems only if structures are compared that comprise strings. Comparison of such structures could fail despite all structure elements being identical.

Remedy/workaround -

Monitor: Failure to display fields or properties for references

Error description If the base of a variable to be displayed in monitor was of the access type Reference ("ref"), JetSym failed to display this variable if the hierarchical level was greater than 1 (more than one "." in the expression, e.g. nested structures or property chains).

Remedy/workaround -

ST projects: Problem with online version detection

Error description In ST projects, the option "Online Version Detection" was applied only when the button "Test" was activated. Now, the version is checked also during program download, and the version is set accordingly.

Remedy/workaround Test the connection before downloading files.

Sample program "AutoBuild": JetSym may hang in the state "No response"

Error description If the program "Autobuild.exe" that comes with JetSym (in folder Samples\JetSymAutoBuild) or the scripts "Autobuild.jse" or "Autobuild.vbs" was executed, it could happen that JetSym hung up in the state "No response" rendering it inoperable.

Remedy/workaround -

Timeout for Ethernet axes can be specified separately

Error description Now, JetSym lets you specify in the axis parameter dialog a timeout value that is independent of the controller configuration.

Remedy/workaround -

Oscilloscope: Occasional dropouts at recording in Live Mode (in continuous recording mode)

Error description During oscilloscope recording sessions in continuous live mode it could happen that occasionally some measuring points were not recorded.

Remedy/workaround -

Error when loading legacy projects

Error description When loading legacy projects (JetSym versions 4.4 or earlier) it could happen that axis groups were indicated as having errors, and that no axis ID was assigned to them.

Remedy/workaround Delete the axis group and re-create it.

Oscilloscope: When the STX VM window (virtual controller) was closed and then re-opened, JetSym failed to continue recording data irrespective of the fact that the controller was running

Error description If the virtual machine STX VM at recording data in oscilloscope mode (live mode) was terminated and then relaunched (by closing and re-opening the STX VM configuration page), JetSym failed to continue reading data and displayed a horizontal line only.

Remedy/workaround Terminate the recording session and relaunch it.

Upon closing and re-opening a workspace, JetSym failed to re-open an open MC global window

Error description Upon closing and re-opening a workspace, JetSym failed to re-open a MC global window that was opened in this workspace before. Furthermore, the position of the split bar was too large when the window was re-opened manually.

Remedy/workaround -

Incorrect information displayed in Module Setup

Error description	In Module Setup, in lines where an enum value is to be selected wrong texts from other lines appeared. This bug occurred only if no values had been selected in the selection boxes to follow.
Remedy/workaround	-

JetSymST or JetSym projects: Array index check in Setup

Error description	Unlike STX projects, in ST projects JetSym failed to check in the Setup window whether changes made to an array index using the +/- key resulted in values out of range.
Remedy/workaround	-

Failure to update the file status of Setup files

Error description	When hierarchical structures in Setup files were expanded or collapsed, JetSym often failed to display the asterisk in the document title. This asterisk indicates that changes have been made to this file.
Remedy/workaround	-

Incorrect assignment of task numbers during IntelliSense update

Error description Upon deleting symbol information as a result of cleaning up the project, it could happen that JetSym assigned wrong numbers to tasks when the workspace was re-loaded and IntelliSense was updated. This could result in incorrect addresses of task-local variables in Setup and Monitor. This bug occurred only with source code containing task commands in subroutines (Sub) or functions (Function) which have been declared before the actual task declaration.

Remedy/workaround Rebuild the project.

Missing parameter information in Tooltip

Error description JetSym failed to display parameter information on user functions in JetSym ST or JetSym projects if an IntelliSense update has taken place before.

Remedy/workaround Rebuild the project.



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