

YASKAWA

Release Notes for MotionWorks IEC

Release 3.3.0 Build 209

January 6, 2017

Key New Features		
Number	Summary	Release Notes
9643	Hardware Configuration 'Offline Save' performance is improved	Hardware Configuration is now more than 5 times faster than prior releases.
9682	Delta robots are supported.	Hardware Configuration now supports axis groups for delta robots. Firmware version 3.3.0 is required and MPiec controller with part number PMC-U-MP3####RBT.
9923	MLX200 is configured through Hardware Configuration.	The MLX200 configuration page within Hardware Configuration has been redesigned with the following improvements: <ul style="list-style-type: none">• Icons were added to send and receive MLX200 configuration.• Scan for MLX200 devices button was added to the page and to the Add Adapter dialog. (MLX200 devices must be on the same subnet as the MotionWorks IEC computer to be detected.)• Assembly instance data is now hidden.
9980	SigmaWin+ can be used through Mechatrolink-III (MPiec pass-through)	Hardware Configuration now enables Ethernet configuration for Mechatrolink Message Relay in MP3x00iec configuration files. (Auto Search is not supported by MPiec controller.) Supported versions: <ul style="list-style-type: none">• SigmaWin+ 5 (v5.72 or later)• SigmaWin+ 7 (v7.11 or later)
10004	Sigma-7Siec is supported.	This is the first release which supports Sigma-7Siec.

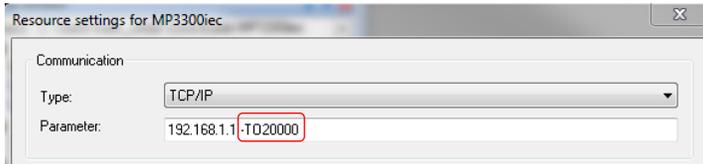
Other New Features		
Number	Summary	Release Notes
126	Quicker response when attempting to go online with unreachable controller	Hardware Configuration has been modified to more quickly identify a connection failure to an unreachable controller.
1422	Tuning optimization is streamlined.	Servo drives have a new Optimization configuration tab containing a parameter set for performance optimizing. Drive parameters Pn109, Pn10A, and Pn812 and controller parameters 1310 and 1311 are adjusted.
1780	Mechatrolink node list validated when 'Communication Cycle Time' is changed	Validation of Communication Cycle changes has been improved in Hardware Configuration to disallow settings that may not work correctly.
8241	Motion queue size is adjustable	Motion queue size is now configurable for single-axis and multi-axis groups.
8319	Fractional Machine Cycle values are allowed	Lower range limit for axis parameter Machine Cycle has been reduced from 1.0 to 0.000000000001 to allow fractional values.

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8903	Clarified instructions for converting v2.x libraries when opened in v3.x	When extracting a ZWT created in an older version of MotionWorks IEC, the software will now explain the implications of converting the library in place: Converting in place destroys the ability to open those user libraries with the 2.x version in the future. If in doubt, answer "no" to this question, which will cause the libraries to be converted in the MotionWorks IEC 3.x folder, thereby maintaining the usability of the original 2.x library.												
9167	Compilation warnings for multiple instances of a function block can be suppressed	Option setting at Extras->Options->Build->Disable warning on multiple invocations has been added. Enabling this setting will suppress the compiler warning when a specific instance of a function block is used multiple times.												
9373	In Hardware Configuration, Multiple axes can be selected for deletion or to switch the hardware mode	The servo network grid in Hardware Configuration now allows selecting multiple devices for deletion or switch hardware mode.												
9635	New default libraries added to new project templates	The YMotion firmware library and the Math_Toolbox user library have been added to the new project templates.												
9885	Overtravel configuration is improved	Drive parameters related to overtravel function have been moved to their own "Overtravels" tab in an axis node within Hardware Configuration.												
10155	Default scan times updated to improve performance.	Default values for cyclic task intervals in MotionWorks IEC Pro project templates have changed for better task synchronization with Mechatrolink. <table border="1" data-bbox="604 919 1419 1024"> <thead> <tr> <th>Task Name</th> <th>Old default task rate</th> <th>New default task rate</th> </tr> </thead> <tbody> <tr> <td>FastTsk</td> <td>10 ms</td> <td>8 ms</td> </tr> <tr> <td>MedTsk</td> <td>20 ms</td> <td>24 ms</td> </tr> <tr> <td>SlowTsk</td> <td>100 ms</td> <td>96 ms</td> </tr> </tbody> </table>	Task Name	Old default task rate	New default task rate	FastTsk	10 ms	8 ms	MedTsk	20 ms	24 ms	SlowTsk	100 ms	96 ms
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Bug Fixes		
Number	Identified Issue	Release Notes
6430	Hardware Configuration gives error message "Cannot connect" when MPiec controller has invalid archive installed.	Handling of errors when connecting to a controller with invalid startup configuration has been improved.
8302	For SGD7 and SGD7 SERVOPACKs, Hardware Configuration did not display the Function tab nor some parameters in the Absolute Encoder tab.	All servo drive models now properly display the "Function" and "Absolute Encoder" tabs.
8559	Removing variables from Network Variables worksheet cause errors when compiling.	Previously, after variables were deleted from the Network Variable worksheet, the user was required to compile twice to get error messages related to the network variables to go away. This has been fixed and multiple compiles are no longer necessary.
8759	MotionWorks IEC crashed when removing unused variables or performing Global Search and Replace	Repeatedly building Cross References caused MotionWorks IEC to crash every hour or two, particularly on large projects.

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8829	Servo Parameters not preserved when changing controller type	When changing controller types that also involves changing servo drive models (such as from MP2600iec on Sigma-5 to MP2600iec on Sigma-7), Hardware Configuration will now preserve existing drive parameter values when applicable. Previously if drive models were automatically changed, the replacement drives had default parameter values.
8992	MotionWorks IEC crashed after deleting a large user-defined data type variable while the Initialize Multi-Element Variable window was open	Deleting variables with the "Initialize Multi-Element Variable" window open will no longer cause MotionWorks IEC to crash.
8994	MotionWorks IEC crashed when using "Global Find"	MotionWorks IEC no longer crashes with C++ runtime error when using "Global Find" on a project.
9104	Cannot add or remove rows in LD worksheet when there are two consecutive rows with left power rails in the same column	Rows can now be added or removed in this situation.
9133	Logic Analyzer did not print correctly.	Multiple Logic Analyzer printing issues have been fixed. <ul style="list-style-type: none"> Printing a Logic Analyzer plot no longer resets the Y-axis scaling back to the auto-scaled values. Printing a Logic Analyzer plot will print whether Logic Analyzer window is docked or undocked. Printing a Logic Analyzer plot will now prompt for selecting printer/options before printing.
9243	When compiling, a structure with array and variable as index with ADD instruction results in "Internal Error!"	Unknown "Internal Error!" no longer occurs when compiling code using a structure with an array and a variable as array index with an ADD instruction. The error message now reads "Ambiguous Expression!", and will redirect to the problematic code.
9310	Order of operations of exponentiation (**) and negation (-) did not follow the order listed in the help documentation.	The online documentation has been corrected. Negation (-) is applied before exponentiation (**) in structured text expressions as specified in IEC 61131-3 Rev 2. While MotionWorks IEC has always used this order of operations, prior releases mistakenly used documentation for IEC 61131-3 Rev 1.
9375	Compiling errors occur when using Modbus %M holding registers with unsupported build settings.	Hardware Configuration now prompts to change to a more recent MotionWorks IEC project build setting if the feature 'Use %M for bidirectional Holding Registers' is not supported by the current build settings. This is to prevent a "The direct address does not match to any defined memory area" error when compiling. Build setting 3.0.3 or newer is required for %M bidirectional holding registers.
9423	Hardware Configuration Test Moves fail silently when servo has POT/NOT over travel.	Hardware Configuration will now detect overtravel conditions that prohibit motion during test moves. An error message indicates that the test move has failed.
9755	Sending offline configuration did not include unsaved changes	Hardware Configuration now prompts to save offline changes prior to sending the configuration to controller via the Controller Configuration Utilities.
9906	Axis displayed as offline when attempting to enable servo with alarm that prevents servo on.	Hardware Configuration correctly displays a SERVOPACK as offline if it fails to enable due to an alarm.
9942	Reassigning deleted tasks in multiple resource project may not work	When project contains multiple resources, deleting a task now limits task reassignment to the correct resource. Previously, task assignment allowed tasks to be set to those of different resources resulting in unexpected behavior.

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9960	MLX200 power status incorrect when MLX200 is in simulation mode.	Group parameter 2704 ("Powered") now reports servo power state correctly in simulation mode.
10016	Reset Absolute Encoder function didn't clear A.CC alarm on MP2600.	Hardware Configuration's Reset Absolute Encoder functionality has been modified to accommodate a small behavior difference in the MP2600iec controller.
10029	Fail to go online with old firmware that doesn't support auxiliary IP addresses	Hardware Configuration can now go online with a controller running older firmware that does not support auxiliary IP addresses (multi homed).
10047	Hardware Configuration can get "stranded" on non-existent second monitor that was previously connected to PC.	Hardware Configuration now always opens in visible desktop space. Previously it would open at last known position even if the location was invalid, such as an extended display screen no longer available.
10124	340C 0100: Invalid parameter passed to ProConOS I/O Driver on projects converted from MotionWorks IEC v2.x	A bug in the Modbus server I/O driver has been fixed. This bug occurred when MP3x00iec projects were converted from MotionWorks IEC 2.x to 3.x and would result in alarm 340C 0100: Invalid parameter passed to ProConOS I/O Driver.
10233	VIPA SLIO or MLX200 device did not correctly show differences when using Project Compare function.	Bug has been fixed for project comparison when using VIPA SLIO or MLX200 devices. Previously MotionWorks IEC reported differences when there were none.

Known Issues			
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10235	"Can't read from PLC" message after download changes is performed	<p>It is possible to get "Can't read from PLC" error messages when downloading changes to RAM. This error is more likely when the project is large and the CPU has a high load.</p> <p>This error can be avoided by increasing the communications timeout (recommended timeout is 20 seconds):</p> <ul style="list-style-type: none"> Right click on the Resource and choose "Settings". In the "Parameter" field, add the text <code>-TOxxxxxx</code> (where xxxxx is the timeout value in milliseconds) after the IP address. <ul style="list-style-type: none"> Example: Enter <code>192.168.1.1 -TO20000</code> in the Parameter field to set a 20 second timeout at that address. Press OK.  <p>Note that when returning to the settings dialog later, the timeout will not be shown in the Parameter field, though it is still active.</p>	
9868	Hotkeys sometimes stop working after using Hardware Configuration	On some computers, hotkeys (such as F9 to make the project) stop working after Hardware Configuration has been launched.	Closing and relaunching MotionWorks IEC will reset the hotkeys.

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9469	Compiling error occurs when 1) EQ block's EN has an array with an INT variable used as array index pointer and 2) the block's ENO connected to another block	The compiler fails to compile when: 1) An array with an INT variable being the array index pointer is assigned to EN of EQ block and 2) ENO of the EQ block is connected to EN of AND block. The error displayed is <code>Internal Error!</code>	Internal error does not occur if: 1) The Array Boundary Checking in the Resource Settings is turned off, and 2) If the datatype is an elementary INT datatype rather than an Array of INT.
7052	After communication time out, Controller Utilities is unavailable	When online, if communication to the controller is lost the Online Menu has items enabled and disabled as if the controller is still online.	This can be corrected by attempting to go online again. Using the invalid menu items does not produce any negative result.
7049	Maximum size of a POU or global variables for MP3000iec is 4MB	The MP3200iec controller has 20 MB of memory for non-retain data, however the maximum amount of data in one POU or the global variables table is 4MB.	
6795	Unidentified Unicode text strings when using "Language for non-Unicode programs" setting	This occurs when the MotionWorks IEC language is set to Japanese or Simplified Chinese on an English language OS. There are some situations where the displayed text is unidentifiable; a series of question marks are displayed instead.	<ol style="list-style-type: none"> Using Windows Update, install all the Asian language packs. Set the language for non-Unicode programs to Japanese: Settings→ Control Panel→ Region and Language→ Administrative→ Change my system locale Use Japanese formats: Settings→ Control Panel→ Region and Language→ Formats
6628	Continuous trace mode shows gibberish values if debugging mode is stopped and restarted	Continuous trace mode cannot guarantee that samples will not be dropped. When samples are dropped due to cpu overload or other reasons, a value of "-1.#QNAN0" will appear when the data is exported.	For a more accurate trace use non-continuous mode.
6622	Project Wizard does not behave as expected.	In some circumstances, the Project Wizard will not create a new project.	For new projects, use the project templates instead of the Project Wizard.
5916	Hardware Configuration logging fixes the sample time at 10ms, should use the Mechatrolink cycle period		If faster sampling is desired, Create a task in the IEC application that runs at the same rate as the Mechatrolink cycle, add MC_ReadParameter function blocks to that task, and use the Logic Analyzer to record data.
5833	I/O group address range does not match text in global variables I/O group name	Editing the name of Ethernet/IP or Modbus device, or adding and deleting devices with the same settings, can cause a disconnect between I/O Groups and Variable Groups. This can cause the variable addresses to be unrelated to I/O group address range.	Save the Hardware Configuration between deleting a device and re-entering it.
5753	Logic Analyzer does not upload data when toolbar button "stop recording values" is pressed.	Logic Analyzer will not upload data after pressing the stop button. The log buffer must fill up first for the data to be transferred. This affects MP2600iec, MP3200iec, MP3300iec, and Sigma-7Siec.	Do not use the "stop recording" button if Logic Analyzer data is required.
1693	Slow compilation when Symantec Antivirus is enabled	Compiler runs slowly when Symantec Antivirus is enabled.	Exclude MotionWorks IEC file types from virus scan. File types: cic, dbd, dip, dit, diw, st1, sto

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1516	Project source code stored on controller has wrong extension in express (ZipFile.zwt, should be .zwe)	Project source code is saved with wrong extension for MotionWorks IEC Express usage. (ZipFile.zwt, should be .zwe) when downloading the source code to the controller.	After uploading from the project archive from the web interface, extract ZipFile.zwt, change file extension to .zwe before opening it with MotionWorks IEC Express.
1165	Single Step debug does not always work	On MP2300Siec and MP2310 only, single step debug mode does not work if multiple instances of a function block exist. The editor will display the wrong instance with incorrect debug values.	If other instances are unused, delete those instances of function blocks before debugging. Otherwise, debugging can proceed if you click on the correct tab for the proper instance after each time the code stops at a breakpoint.
1041	Cannot create a MotionWorks IEC project using the Project Wizard – Hardware Configuration fails to launch because configfiles directory is missing.	Cannot launch Hardware Configuration for project created with the project wizard	Create a project with one of the predefined templates for a controller model.
1034	Cannot connect to the controller from the Hardware Configuration if DNS reverse and forward lookups contain mis-matching entries	If the DNS reverse lookup for the controller IP address returns a host name that has a forward lookup to a different IP address, then connection with the Hardware Configuration will fail.	Use a different IP address for the controller or fix the DNS entries on the DNS server.
875	Hardware Configuration does not run when launched by a user who did not install it, and who does not have Administrator privileges	Administrative privileges are required to install.	Login with Administrative privileges before installing.
825	Project file name length is limited to 24 characters	File name length is limited to 24 characters which can cause issues when saving.	Use a filename 24 characters or less.