



Release Notes for MotionWorks IEC

Release 3.2.0 Build 197

Yaskawa America, Inc.

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1. New Features

| Number | Summary | Release Notes |
|--------|--|--|
| n/a | Sigma 7 (SGD7) Support | <p>This version is the first to officially support Sigma 7 ServoPacks, with the exception of 400 volt models.</p> <p>MotionWorks IEC Hardware Configuration adds support for a wildcard character that will recognize extra characters at end of SGD7 model strings. The Hardware Configuration will display the SGD7 models with a '+' at the end of part number.</p> <p>MotionWorks 3.1.0 and prior releases only support the standard SGD7 models with 'IMI' Mechatrolink-III connector; they do not recognize extra characters at end of SGD7 model strings. For 3.1.0 and older releases, use the CompatibleParts.XML file for ServoPacks with additional HWBB module attached or ServoPacks with and RJ-45 Mechatrolink-III connector. Refer to MTN-937LKQ on www.yaskawa.com.</p> |
| 789 | Multi Resource Support | <p>MotionWorks IEC Pro now supports multiple controller resources in a single project. Use the Hardware Configuration to add or delete controllers (Resources). All MPxxxxiec controller types plus the PLC_Simulator type may be inserted or deleted.</p> |
| 5924 | "Reference Unit per User Unit" conversion displays encoder to user unit scaling. | <p>The Hardware Configuration's 'Configuration' tab now includes a "Reference Units per User Unit" conversion. This is the number of encoder pulses to move one user unit, and is useful when tuning and setting up other parameters in SigmaWin.</p> |
| 6855 | Ability to write to driver inputs from the IEC application program. | <p>Inputs (variables in %I memory space) can be forced / overwritten in the IEC application for debugging purposes.</p> |
| 7706 | AXIS_REF.AxisNum initialized automatically when an axis is created. | <p>The Hardware Configuration now initializes AXIS_REF.AxisNum by adding the correct axis number in the Init column of the Global Variables grid.</p> |
| 7779 | H-Bot and T-Bot mechanism support | <p>H-Bot and T-Bot mechanisms were added to axes group configuration. The configuration output file (Group.XML) for these mechanisms are not supported in prior versions of MotionWorks IEC. Only the current version or newer versions of MotionWorks IEC will be able to load such Hardware Configurations.</p> |
| 8713 | Automatic creation and download of PDD variable information | <p>A PDD variable list (CSV) is now downloaded to the controller when a project is downloaded and PDD variables are defined. Variables selected as PDD can be watched at the controller's WebUI Status page in the PLC Variables tab. The watch list will only include up to the first 50 PDD variables defined. Only PDD variables of basic data types may be monitored, not user defined datatypes.</p> |
| 9057 | HMI Tag Export support for Exor JMobile Software | <p>HMI tag import/export of Modbus variables between MotionWorks IEC and HMI software packages now supports Exor JMobile software.</p> |



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| 9138 | Yaskawa Robotics MLX200 robot controller support | Configuration support was added for Yaskawa Motoman MLX200 robot controllers. An additional license, part number PDE-U-IE3PE-RBT (E-license) or PDE-U-IE3PH-RBT (USB key) is required to configure this device. |
| 9192 | User libraries required for group support automatically added. | When an AxesGroup is created in Hardware Configuration and saved, support libraries required to operate a group will be automatically added to the project tree window under the Libraries section. |
| 9226 | Sigma-7 Servopacks with RJ-45 Mechatrolink-III connector support | Sigma-7 servopacks with Mechatrolink-III will be offered in North America with an RJ-45 type as the standard connector. The ServoPacks have a different part number and are supported. |
| 9257 | Y_DirectControl: Position Control with Torque Feed Forward | Y_ControlMode enumeration type now includes Y_ControlMode#PositionTrqFFMode. This allows the Y_DirectControl function block in the YMotion firmware library to operate in position mode with a torque feed forward value in percent of rated torque provided at the Torque VAR_INPUT. |
| 9300 | MotionWorks IEC support for multiple IP addresses per physical network adapter | Hardware Configuration supports multiple IP addresses for each physical network adapter. Each TCP/IP Settings node contains a new section for adding more IP settings as auxiliary addresses for multi homed applications. |
| 9431 | Support for Sigma-5 Mechatrolink-III amplifier with FT006 firmware | The FT006 amplifier firmware can operate high-speed programmable outputs based on servo position. The part number for this servopack is now supported. |
| 9481 | Specification of rotational axis with XYZ Gantry mechanism | 4-dimensional gantry mechanism (X, Y, Z, Rz) support has been added. |
| 9532 | M-Systems R7 series Mechatrolink-III Remote I/O product support | Added support for any M-Systems R7-****ML3 Mechatrolink-II I/O module. Hardware Configuration automatically allocates 12 bytes for input and 12 bytes for output memory in the project. |

2. Important Changes

The following features were modified and may cause minor compatibility issues with projects created in previous versions.

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|--------|--|--|
| 9190 | AXES_GROUP_REF Data Type definition modified | The AXES_GROUP_REF structure datatype definition has been extended with additional members. The structure's AXIS_ARRAY type member has been renamed from "Axis" to "AxisRef", and a new type "Axis" member has been added as GROUP_COORD_SYS. Application programs may need to be updated to use the AXES_GROUP_REF variables accordingly. |

3. Bug Fixes

The following issues were identified and fixed for this release.

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| 9365 | Boolean Modbus variables at a hardware address without a bit reference cause compilation errors | Saving in Hardware Configuration no longer removes the '.0' at the end of Modbus memory addresses (e.g. %MX3.483328.0). This problem was introduced in 3.1. |
| 9686 | Ethernet/IP adapters cannot be added if a 218IF-Y1 option card is in the system | 218IF-Y1 option cards no longer prevent adding Ethernet/IP adapters. |

4. Known Issues

| Number | Summary | Release Notes | Workaround |
|--------|--|---|--|
| 9800 | Some axes are marked as [Offline] after connecting to controller with an offline configuration | Going online with offline configuration may mark the axes as [Offline]. Affected drive parts include SGDh, high capacity SGDv models, and inverter models. | Save the configuration to the controller and reconnect. |
| 8758 | MotionWorks IEC crashes when removing unused variables or performing Global Search and Replace | Repeatedly building Cross References every couple of minutes may cause MotionWorks IEC to crash every hour or two, particularly on large projects. | |
| 7444 | Axis is switched offline after trying to enable it during an alarm | This issue applies to the Hardware Configuration. When on the Tuning or Test Move tabs, and the Enable Axis icon is pressed while there is a servopack alarm, the axis will be switched to "Offline" status in the Configuration Tree. | Switch the Hardware Configuration offline and then back to online. Clear the servopack alarm before attempting to enable the axis. |
| 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 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 MP3200iec is 4MB | The MP3200iec controller has 20 MB of non-retain data memory, 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 a value of -1.#QNAN0 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 that 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. |

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| 5753 | LogicAnalyzer for MP2600iec MP3200iec and MP3300iec - logging 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. | |
| 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 |
| 1593 | Function block outputs are not retained on warm start | The outputs of function blocks like CTU (counter up), CTD, TON etc do not get retained on a warm start even though they are checked to be retained. | |
| 1516 | Project source code stored on controller has wrong extension in express (ZipFile.zwt, should be .zwe) | Issue: 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, then open 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 on Windows Vista or higher | Login with Administrative privileges before installing. |
| 825 | Increase max Project filename size of from 24 to 64 characters | File name length is limited to 24 characters | Use a filename 24 characters or less. |