

# YASKAWA

## Release Notes for MPiec controller firmware

Release 3.6.1

December 6, 2019

New Features		
Number	Summary	Release Notes
12635	Support for 80-byte Mechatrolink-III packet.	Version 3.6.1 adds support for the 80-byte Mechatrolink-III packet format used by the SR200 product.
12848	Parameter 2110 (co-linearity threshold) upper range extended to 360°.	Upper limit of co-linearity parameter 2110 extended to 360° (was 10°).
12916	Co-linearity threshold for circular moves increased.	MC_MoveCircular has had its entry/exit co-linearity angle threshold increased to 0.01 radians. Additionally, the allowable variation of center distance from start and endpoint in the center method has been increased from 0.01% to 1% of the nominal radius.

Bug Fixes		
Number	Identified Issue	Details
12048	MP2600, Sigma-7Siec: Refreshing WebUI during firmware update causes update to fail	Previously, refreshing the web page (or other WebUI network traffic) during firmware update for MP2600 and Sigma-7Siec had a possible failure mode which could corrupt the firmware install, and render the controller inoperable. This is fixed in v3.6.1.
12750	WCS coordinates for Mechatrolink groups do not update during conveyor tracking	While conveyor tracking is active, the WCS positions were not updating (PCS and MCS were updating properly) This is fixed in v3.6.1.
12870	SigmaWin+ reports incorrect serial number for MP2600iec	This has been corrected in version 3.6.1.
12871	SigmaWin+ reports incorrect manufacturing date for MP2600iec	This has been corrected in version 3.6.1.
12886	SigmaWin+ reports incorrect modification code for MP2600iec	Previously, an attached MP2600 would report as Y-Mod Y037 when viewed in Sigma-Win. This has been corrected to report no Y-Mod value.
12984	MC_ReadAxisStatus incorrectly reports error 61713	If an axis changes state while function block MC_ReadAxisStatus is executing, internal motion kernel error (61713) will occur. This has been changed to defer the evaluation of the state until the next scan in these cases.

Known Issues			
Number	Known Issue	Details	Workaround
4356	Axis state machine doesn't track superimposed moves	Executing MC_MoveSuperImposed without executing another motion block afterwards causes the axis to remain in the standstill state.	Executing another motion block after MC_MoveSuperImposed fixes the axis state.

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4356	Axis state machine doesn't track superimposed moves	Executing MC_MoveSuperImposed without executing another motion block afterwards causes the axis to remain in the standstill state.	Executing another motion block after MC_MoveSuperImposed fixes the axis state.
4395	Large positions will not be displayed to full precision in the web interface Java applet or Hardware Configuration	Positions greater than 2147483648.0 are written in scientific notation and will lose some precision when displayed in the applet or Hardware Configuration. The position stored in the controller is not affected.	If possible, change the origin using <i>MC_SetPosition</i> or <i>MC_StepRefPulse</i> or change the position scale so that the full position can be seen.
4641	With classic web server, booting up in supervisor mode shows extra menu options	When controller is started in supervisor mode, the web menu shows all menu options immediately even if the Admin user is not logged in. Some options will require login before they can be used.	Login with the Admin password in supervisor mode.
5227	XML configuration files are cached via classic web server	When a project archive is deleted and a new one installed, the classic web interface appears to show the old version of <code>user/config/startup/io.xml</code> . The file has actually been updated, but the web browser has cached the old version.	Disable caching of XML configuration files in Internet Explorer.
5460	<code>Y_CamOut.DisengageData.EndMode=Immediate</code> is not supported	Disengage mode is not supported and will result in error 4400 – unsupported disengage mode.	Implement the same behavior by using the current master position as disengage position.
5521	CPU utilization is not displayed accurately for MP2600iec when the IEC task time and motion engine cycle time are the same	The CPU utilization always reports 0.1% when an IEC task runs at the same rate as the motion engine. To get more accurate utilization data, the scheduler must run more often than the user task and the user task must continue to execute over multiple scheduler cycles.	The individual task statistics <code>MinDuration_us</code> , <code>CurDuration_us</code> , <code>MaxDuration_us</code> stored in <code>PLC TASK 1</code> (etc.) are reported in microseconds, which is more useful for determining watchdog timers for tasks running at the same rate as the motion kernel.
5686	MPiec Modbus server seems to stop communicating	If a Modbus Master polls for data from the MPiec too often, the controller can be overloaded and slow Modbus TCP/IP communication.	On the Modbus Master, add a 5ms (or longer) timer between read and write queries.
5703	MP2600iec can get watchdog alarm and bad CRC on restart	To reboot, the controller sends a software reset command to the ServoPack. Since the ServoPack is rebooting, it does not acknowledge the command.	Ignore these alarms in the alarm history.
5724	PLC will enter the RUN state after finishing a test move in Hardware Configuration	When attempting to start a program using the Project Control dialog while running a test move through the Hardware Configuration, the controller correctly prevents the PLC from entering the RUN state, but still indicates that the controller is in the RUN state with the request to enter RUN mode pending. When the move finishes the PLC will enter the RUN state.	Do not RUN the PLC when Hardware Configuration is performing a test move.
5915	Trying to enable the same axis with two <i>MC_Power</i> blocks at the same time results in internal motion kernel error	Trying to enable the same axis with two <i>MC_Power</i> blocks at the same time results in internal motion kernel error.	Do not use multiple <i>MC_Power</i> blocks on the same axis at the same time. Yaskawa recommends that each axis have only one <i>MC_Power</i> block.

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5965	Configuring a SERVOPACK to use a pre-configured output prevents IEC control of any SERVOPACK outputs	If a ServoPack function such as /BK brake control is assigned to any of the ServoPack outputs (SO1, SO2, SO3), The MPiec controller is prevented from controlling any of the outputs.	No workaround exists.
6343	Ethernet/IP Multicast only works correctly on Port A (CN11A) of the MP2600iec	Multicast Ethernet/IP data will only be broadcast over Port A (CN-11A). Consequently, Port B (CN-11B) should not be used for Ethernet/IP communication.	Use Port A (CN-11A) for Ethernet/IP communication.
6712	MP3200iec and MP3300iec CPU architectures are not reporting maximal floats as NAN (Not a Number) or INF (Infinite)	MP3200iec and MP3300iec do not support IEEE 754. As a result, adding two floating point numbers, which would normally cause an INF or NAN error, will report the maximum floating point value instead. Additionally, ENO will remain TRUE instead of becoming FALSE which is expected when an overflow is detected.	User applications should check for overflow conditions.
7234	BOOL value from comparison stays on for two scans	BOOL result from some function blocks (AND, for example) can stay on for an extra scan.	If EN/ENO connections are used somewhere in the LD network then this bug will not occur as the compiler will take another path. If you don't connect EN/ENO then the compiler will take the path with the bug. If at least one EN/ENO is connected in each network then the good path will be taken by the compiler.
7576	After Mechatrolink-III communication errors, the MTD2310 remote I/O module does not reconnect	Upon removing and reconnecting the Mechatrolink-III network connection, the MTD2310 remote I/O module shows a flashing red 'F'. Once in this state the controller cannot read inputs or set outputs.	To clear this state, the MTD2310 must be powered cycled.
7606	MC_GroupEnable / Disable should not be used concurrently with Y_ResetMechatrolink		Use interlocks to prevent these function blocks from running at the same time.
9927	Y_CamIn with Y_EngageMethod#AtAbsolutePosition doesn't run multiple times without MC_Stop.	When using Y_EngageMethod#AtAbsolutePosition, the cam shift must be unwound to zero between executions of Y_CamIn. This can be done with either MC_Stop or Y_CamShift.	Use an MC_Stop between successive Y_CamIn blocks (use EndOfProfile to trigger) OR Execute Y_CamShift with the previously used CamEngage Position after every cycle (use EndOfProfile to trigger).
10351	Slowdown in STRING_TO_XXX functions when stack check is enabled	Stack check verifies that memory is allocated correctly on the controller. However, it will reduce performance, especially for the string conversion functions. String conversion functions operate 2 to 3 times slower when stack check is enabled. It is recommended to use the stack check during development, but not when the system is deployed.	Deactivate stack check before final project deployment.

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10662	When using MC_TorqueControl function block, an unexpected initial velocity or torque value maybe be caused when TorqueRamp input values are small.	When using MC_TorqueControl with a small value applied to the TorqueRamp input, the Servopack may first briefly apply torque in the reverse direction before continuing with torque in the correct direction.	Increasing the TorqueRamp input value can reduce or eliminate this behavior.
11214	Confusing method of adding Auxiliary IP addresses	The process for adding an auxiliary IP address is confusing.	Click the + sign in line with Auxiliary IP to begin the process. The + symbol will turn into a x. Fill out the fields for Address and Subnet Mask and press the + symbol in line with the Address field. Finish by pressing Save to save the results.
11439	Re-initializing PCIe communication during Mechatrolink reset causes RM100 card to stop responding	The RM100 card is not yet supported by MPiec controllers.	Y_ResetMechatrolink cannot be used successfully when an RM100 option card is installed.
12730	Mechatrolink-3 IO Nodes are discovered at startup even if CNFG switch is off	Please use the CNFG switch at the ON position until this issue is fixed in a later version.	None
12928	SR200 Extended Drive Monitor Response is incorrect during Y_ProbeContinuous	The Y_ProbeContinuous function block, while active, takes control of certain monitor-data in the Mechatrolink-III communication to monitor the continuous latch status. This was incompatible with the SR200 monitor strategy.	None
13091	Latch not being correctly released after controller Stop / Warm Start	If a position latch is active due to MC_StepRefPulse, MC_StepLimitSwitch, or Y_ProbeContinuous, the latch is not correctly released when the controller is stopped and warm started.	Execute Y_ResetMechatrolink or cycle power to drives and controller to release the latch.

## Limitations

### Unsupported Card Modules

JAPMC-PL2300-E Counter Module  
 JAPMC-PL2310-E Pulse Output Module  
 218IF-Y1 Serial Communicaiton card not supported on MP3200iec

### Unsupported Mechatrolink Devices

JEPMC-PL2900 Counter Device  
 JEPMC-PL2910 Pulse Output Device