Release Notes for SigmaLogic™ Software Package

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LogicWorks Configuration Utility 2.4.2.2

1. New Features

Number	Summary	Release Notes
6334	Update LogicWorks internal file for 'Return to Factory Settings'	LogicWorks has been updated to include the most recently released version of the SigmaLogic Embedded Software used for Configure-Update-Return to Factory Defaults. The new version is 2.4.2.

2. Bug Fixes

Number	Summary	Release Notes
6164	Pn00B.3 is forced to Zero during Send Project to Controller	Pn00B.3 is used for the configuration of a 3rd party motor and is typically set using SigmaWin+. However LogicWorks was treating this bit as a reserved setting and forcing it back to zero after the servopack parameters had been imported into LogicWorks. This issue may also have affected the setting for Pn00B.2 for input power phase detection. Starting in version v2.4.1 the full value of Pn00B can be imported and downloaded properly.

3. Known Issues

Number	Summary	Release Notes	Workaround
595	No project compare on Connection	The offline file contents are not automatically compared to the actual configuration when Connection is made to a SigmaLogic axis. This can result in a difference between what the user sees in the configuration utility screens and what is stored in the axis.	Establish a Best Practice procedure to manually compare the file name to the current configuration name or to always Receive the current configuration immediately after Connection to a SigmaLogic unit.
638	LogicWorks does not display the values for CN13 Analog I/O	Support for monitoring and controlling the CN13 Analog I/O points from the PLC was added in SigmaLogicEmbeddedCode v1.2.0 and SigmaLogic_AOI v1.2.0. However these values are not currently displayed on the LogicWorks Status and I/O monitoring pages.	Use PLC to monitor and control the CN-13 Analog I/O using Tags 'AxisRef'.I.AnalogInput and 'AxisRef'.O.AnalogOutput.
1150	LogicWorks Setup does not support user-defined installation locations.	For LogicWorks v2.0 and earlier, only the default installation location is supported during Setup. This issue will be addressed in a future version of LogicWorks.	Use the default installation location

1163	Saving project during File - Exit process will not add the project name to the Recent Projects List	There are many opportunities provided to save the LogicWorks project to a file on the PC. The last occurs during File->Exit process. If "Save Project" is chosen during the exit process, the project will be saved properly to the specified location, but the Recent Projects listing will not be updated.	Save the project first as a separate procedure before starting the Program Exit process.
1168	LogicWorks v2.0 cannot connect to SigmaLogic units with 3.0.0.173 firmware	LogicWorks v2.0 and above requires firmware version 3.3 or higher. There are several configuration files that have changed format between these firmware versions. Use the SigmaLogic web interface to update firmware. For more assistance, please discuss with your Yaskawa vendor.	None
4995	Use of a comma in LogicWorks project file name disrupts SigmaLogic embedded project	When LogicWorks sends a configuration to a SigmaLogic unit, a special configuration file containing the project name along with other key information is stored in flash. This file is read by the SigmaLogic embedded code on power-up. When parsing the file, a comma is used as a delimiter. Thus, it is currently not allowed for the project name to contain commas.	Do not use commas when naming LogicWorks files. Instead, use some other character such as a dash or underscore to separate sections of the project name if something other than a space is required.

SigmaLogic Embedded Software v2.4.2.8

1. New Features

Number	Summary	Release Notes
6317	Reduce the Modbus register configuration from 10,000 registers to 128 registers (256-byte)	One of the root causes for experiencing a CPU Overload alarm was determined to be the large amount of load placed on the cpu for updating unused ModbusTCP registers in the configuration. The reserved register space for Internal Registers defaults to 10,000 words (20,000 bytes). However the memory map for SigmaLogic7 modbus requires only 128 words (256 bytes). In version 2.4.2, the configuration has been updated to reduce the available Internal Register space to 128 words. Doing so reduces the cpu load by 10-20% and helps avoid the cpu overload condition. NOTE: Downgrading a unit from 2.4.2 to a lower version may result in AlarmIDs for Invalid parameters passed to the ProConOS IO Driver, due to a mismatch between the embedded code and the IO.xml file in the controller. Contact Yaskawa for further assistance if faced with this situation.

2. Bug Fixes

Number	Summary	Release Notes
6180	Sigmalogic program resets the torque limits on the drive to 0% when MAS is executed after error13020 (Invalid HomeType).	Many applications do not perform an actual Homing procedure with movement. In this case, MAH, type 0 or MAHSP is used on demand to Set the Axis Position to some desired value. If, however, for some reason an error is detected during this process, then the axis torque limits could inadvertently be set to zero, thus impeding all future movements until the axis is rebooted. This issue has been corrected starting in embedded code v2.4.2.
6222	Multi-scan delay between ServoOn command and Enabled status can result in permanent ErrorID 4370	An MAS_Yaskawa stop command may be issued at any time whether the axis is Enabled or Disabled. A certain timing condition was identified where, if the MAS_Yaskawa command was received at a particular point during the transition from Servo OFF to Servo ON, then the embedded code could become stuck in a 'Stopping' state. This would further result in an error code 7340 being reported for any subsequently attempted motion move until the axis was rebooted. Starting in embedded code v2.4.2 an internal interlock was added to prevent this condition and allow the motion engine to transition properly from Disabled to Standstill during the Servo ON process.
6376	Sigmalogic reports CPU Overload error, often during startup	Due to SigmaLogic7 firmware v3.7.0, extra cpu load can be experienced if position is monitored for a non-existent axis. In SigmaLogic7 embedded code v2.4.0, there was internal monitoring for the external encoder axis position even though this axis is not present in hardware. Due to other startup code that exists during reboot, the threshold for CPU Overload was reached more easily. Starting in SigmaLogic Embedded code v2.4.1 (for both SigmaLogic and SigmaLogic7 platforms), code was added to check if the external axis exists before attempting to monitor position. Additional changes were made to the task configuration to move file parsing functions into a Default task so that cpu load is reduced on warm start. Starting in SigmaLogic Embedded Code v2.4.2, changes were made to right-size the amount of registers scanned in the Modbus TCP Internal register space from 10,000 registers to 128 registers. This further reduced the load on the cpu.

3. Known Issues

Number	Summary	Release Notes	Workaround
600	HSI does not wait for move to be In Position	For all other moves, move complete status is sent to the PLC when the commanded profile is finished AND when the motor position is within the range specified by the LogicWorks configuration under Configure - Options - Position Completion Window. In v1.1.0, the High Speed Index moves do not wait to be in the position completion window. Move complete is set when the commanded profile is finished.	Add external delay for subsequent processes/actions that depend on the motor being settled into its final position.
650	Sequence Table execution resumes in certain cases where servo is disabled, then re-enabled	In SigmaLogic AOI v1.2.0, MSF_Yaskawa (Motion Servo OFF) is allowed to execute even though another AOI could be active, such as MSQR_Yaskawa (Motion Sequence Run). Disabling the axis during motion will cause an application fault which normally would abort the sequence. However, if the sequence was waiting for a flag either Before or After motion, then no fault	The user should issue MAS_Yaskawa (Motion Axis Stop) prior to issuing MSF_Yaskawa (Motion Servo OFF) to properly stop an axis and abort sequence execution. Alternatively, the user could set

		would be generated and the sequence table would still be executing even though the servo would not be capable of motion.	the Cancel input on MSQR_Yaskawa. Canceling the sequence will also stop motion.
1184	Function Block Error ID 4422 shows up as "Unknown Error".	Application ErrorID 4422 is a new function block error code most relevant to SigmaLogic7 and Sigma-7Siec based products. ErrorID 4422 means "Position Offset Update Failed" and occurs when not enough time is given to the function for setting motor position. In the Sigma-7Siec-based family of products, the absolute encoder offset is stored in EEPROM memory instead of battery-backed RAM as with other products. Writing the offset to flash takes more time than writing to RAM. If the process is interrupted, ErrorID 4422 will be reported.	Set Incremental Encoder Mode OR avoid the rapid Move-Set Position sequence when programming applications for Sigma-7Siec-based products where absolute encoder is required.
3672	Home to Flag with or without C-Channel has different results if ON the switch when started.	The Home to Flag process currently has no check of the initial flag status prior to beginning the process, nor is there a requirement that the homing process be started with the flag in an OFF condition. Therefore, if at the start of the homing process, then axis is at a position somewhere within the ON condition of the flag, a different home position could be found than if the axis had started from somewhere else with the flag in an OFF condition.	If this is a concern, then it is suggested that the ON range of the home flag be physically set outside the normal working range of the axis so that is can be approached in a more consistent manner and the process always started with the flag in an OFF condition. If that is not possible, then write application code to read the status of home flag before executing MAH and jog off flag before starting MAH.
5078	Attempted programmatic reboot with servo ON returns errorID -20199	If a programmatic reboot of the SigmaLogic unit is attempted while the servo is Enabled, then the reboot will not occur and MCFG_Yaskawa will show AppErr -20199. This is not a valid error ID. However, executing MRSE will return the correct alarm text stating that Reboot is Not Possible. Please ensure in the PLC application code that the servo is Disabled prior to attempting a programmatic reboot.	0

SigmaLogic AOI v2.4.1 for RSLogix 5000

1. New Features

None

2. Bug Fixes

Number	Summary	Release Notes
5121	AppError 13010 when disabling MHSI	In SigmaLogic AOI version 240, the MHSI_Yaskawa block would inadvertently return an ErrorID 13010 when the Enable input is released. This ErrorID will appear at the MCFG_Yaskawa output AppErr. This issue has been corrected in AOI version 241.

3. Known Issues

Number	Summary	Release Notes	Workaround
4866	AOI Active bit of the MCFG block does not work properly	Using multiple instances of an AOI type, for example MAM_Yaskawa in a project may result in the AOI_Active bit at MCFG_Yaskawa to behave improperly. This is because the internal "AOItype"_SB bit will be written in all of the instances.	1) Use AOI_Active in combination with MotionIdle output of the MCFG_Yaskawa AOI. 2) Use independent user-written interlocking specific to the AOI instances to perform even more robust interlocking than is currently available from the AOI_Active and MotionIdle outputs of the MCFG_Yaskawa AOI.