KINGSTAR 3.3

SOFT MOTION RELEASE NOTES

KS-DOC-X64-0015-R15

IntervalZero

KINGSTAR IntervalZero

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KINGSTAR Soft Motion 3.3 release notes

New features

The following new features and improvements are available in this release:

NOTE: Reference numbers, [KS–<XXX>], are for internal tracking purposes.

- Add new supported hardware:
  - Servo drives
    - Fastech Ezi-SERVO II EtherCAT [KS-557]
  - EtherCAT I/O modules
    - Advantech AMAX-4800 Series [KS-610]
    - CKD OPP6 Series [KS-519]
    - Hitachi EH IOCA [KS-521]
    - Interface PCI-450601 [KS-522]
    - Kashiyama ECAT01 [KS-523]
    - Nagano Oki NOKECW R-IN32M3-EC [KS-524]
    - Ricoh AP-10A [KS-525]
    - Tem-Tech Lab. ECG-485 [KS-526]
- Add Ethernet over EtherCAT (EoE) in Concept and its function **`SetSlaveEoeIp`**. [KS-110]
- Add the autotuning algorithm to Tuning Console to find KP/KD values. [KS-116]
- Add File Access over EtherCAT (FoE) functions in PLCopen: **`EC_ReadFile`**, **`EC_WriteFile`**. [KS-473]
- Add the **`GetDCSystemTime`** function. [KS-533]

- Add heartbeat functions: **`ConfigHeartbeat`**, **`PulseHeartbeat`**. [KS-597]
- Add the matrix of supported operating systems and Visual Studio versions. [KS-613]
- Add heartbeat function blocks: **`RTX_ConfigureHeartbeat`**, **`RTX_PulseHeartbeat`**. [KS-620]
- Add homing description in Concepts.

Updates

- Update the user interface and features of KINGSTAR Tuning Console. [KS-587]
- The .NET API Sample is replaced with the .NET Class Sample. [KS-607]
- Support RTX64 3.3. [KS-632]
- The RT and Win32's function list "SDO" is renamed as "Mailbox."

Fixes

- The **`MC_MoveLinearAbsoluteEx`**, **`MC_MoveLinearRelativeEx`**, **`MC_MoveLinearAdditive`**, **`MC_MoveCircularAbsolute`**, **`MC_MoveCircularAdditive`**, **`MC_MoveCircularRelative`** and **`MC_GroupReadActualAcceleration`** functions don't work in the Win32 interface. [KS-548]
- **`MC_WriteDigitalOutput`** doesn't work properly and always returns an Error ID: 6 **mcWrongQueueIndex**. [KS-554]
- When using **`GetServoMotionStatus`** to read motion status, it may return **motionStopped**, even though a motion command has been sent successfully. [KS-555]
- When **JogForward** and **JogBackward** are enabled at the same time using **`MC_Jog`** during **Standstill**, the error ID is 21, which is not in the **`MC_Error`** list. [KS-556]
- If there are only input modules on the EtherCAT bus and one of input modules connects to Omron DI Module GX-ID1611, KINGSTAR cannot access the input data. [KS-559]

- **MC_GroupReadActualVelocity**'s **Valid** output do not change after it is called. [KS-578]
- **MoveServo** does not move all the selected axes. [KS-583]
- **WriteServoDO**'s return code is wrong if the drive is simulated. [KS-584]
- When PLC writes data into the KINGSTAR share memory, the initialization doesn't work properly. Initially the data in the share memory doesn't match the data in the PLC. [KS-585]
- If you use **MC_GroupReadActualVelocity** to read **PathVelocity** during a **MoveCircular** movement, the **PathVelocity** value will be incorrect. [KS-598]
- **MC_GroupDisable** and **MC_UngroupAllAxes** do not stop current group motion. [KS-600]
- **MoveServo** functions don't work in the Win32 interface. [KS-601]
- When using servo module functions to configure homing motion profile, the return code is -1 (returnFailed), but the functions still take the parameters. [KS-608]
- The axis does not decelerate and go back to the latched position during the forward motion of **homingLatch**. [KS-615]
- **MC_GroupHalt** does not use the input **Jerk** value. [KS-642]
- **MC_Jog**'s parameter, **InVelocity**, is not reset after being aborted. [KS-645]
- In the Win32 interface, KINGSTAR uses **MC_MoveLinearRelative** when you call **MC_MoveLinearAdditive**. [KS-647]
- If running **MC_GroupStop** when **MC_MoveLinearAbsolute** is running, all axis groups stop abnormally and an error occurred. [KS-651]
- **MC_GroupStop**'s output is wrong after its command is aborted by **MC_GroupDisable**. [KS-652]
- **MC_GearIn**'s **InGear** and **MC_GearInPos**'s **InSync** will keep set after **CommandAborted** is set. [KS-660]

- **HomingStatus** is unable to get **homingSuccess** when it works on the **homingSlave** mode. [KS-663]
- In the Win32 interface, **`GetFeature`** returns the wrong values for some features. [KS-667]
- **`MC_GroupHalt`** in Win32 doesn't work properly, because it links to single axis' **`MC_Halt`** in the motion library. [KS-669]
- NetApiInterface sample cannot start again after the **Stop** button is clicked. [KS-702]

Known issues

- ISaGRAF PLC Workbench needs internet connection to install Microsoft .NET Framework 4.5.1.
- If you click **Start/Stop KINGSTAR PLC** in KINGSTAR Soft PLC Runtime when ISaGRAF PLC Workbench is debugging in **Online** mode, the computer may crash. The workaround is stopping debugging first, and then click **Start/Stop KINGSTAR PLC**. [KS-390]
- In the .NET API and .NET Class interface, a few methods link to the wrong methods in the motion library: [KS-672] [KS-673]
    - .NET API: **`SetEoeIp`**, **`GearIn`**, **`GearInPos`** and **`MoveVelocity`**
    - .NET Class:
        - **`SetEoeIpAsync`** method
        - **`MotionGear`**, **`MotionGearInPos`**, **`MotionMoveVelocity`** class > RunCommandAsync method
- In the .NET Class interface, **`PulseHeartbeatAsync`** links to the wrong method in the motion library. [KS-677]

Get support

KINGSTAR offers a number of support options for KINGSTAR users, including third-party, online and phone support.

Third-party support

If you are a customer who purchased a KINGSTAR product through a third-party reseller, contact the reseller for support.

Online support

The KINGSTAR Customer Support web page is located at:

http://kingstar.com/support/

The KINGSTAR support web pages provide electronic access to the latest product releases, documentation, and release notes. You can access the online support ticketing system to submit issues or questions.

Before calling technical support

Please have the following information ready before calling KINGSTAR Technical Support:

The version number of your RTX64 and KINGSTAR software

To obtain the RTX64 version number:

1. Click **Start** > **All Programs** > **RTX64 3.4 Runtime** > **Control Panel**.
2. In the **RTX64 3.4 Control Panel**, record **Version** shown in the **Runtime Information** area.

To obtain the KINGSTAR version number:

1. Click **Start** > **All Programs** > **KINGSTAR** > **Runtime**.
2. In **Windows Explorer**, click the `ksm64.rtdll` file, and right-click the same file again.
3. On the shortcut menu, click **Properties**.

4. In the **ksm64.rtdll Properties** window, click the **Details** tab, and record **Product version**.

Phone support

For technical support related to installing and using KINGSTAR, please call technical support at this number:

+886-2-2556-8117

Hours are Monday-Friday from 9:30 to 18:30, UTC+08:00, excluding holidays.