# KINGSTAR 3.6

## MOTION RELEASE NOTES

KS-DOC-X64-0015-R19

IntervalZero

KINGSTAR IntervalZero

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# KINGSTAR Motion 3.6 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
    - ABB MicroFlex e190 [KS-1071]
    - ICPDAS ECAT-2055-32 [KS-1134]
    - Panasonic Minas A6BE [KS-1058]
    - Panasonic Minas A6BF [KS-1046]
    - RS Automation CSD7_01BN1 [KS-1070]
    - Sinamics S120 via Robox module [KS-875]
    - TPM SVR-K112 [KS-1087]
  - Stepper drives
    - Leadshine DM3E-556, DM3E-870 [KS-1129]
    - MOONS' STF06-EC [KS-1007]
  - EtherCAT I/O modules
    - Beckhoff EL6001 serial interface RS232 [KS-530]
    - Beckhoff EL6021 serial interface RS422/RS485 [KS-531]
    - Beckhoff EL7342 [KS-1156]
    - Toshiba 4-axis SCARA robot controllers TS3000 and TSL3000 [KS-1155]

- Add COM port over EtherCAT in RTX64. More information is in Concepts > COM port over EtherCAT [KS-109]
- Add Chinese to the display language of KINGSTAR LogicLab, KINGSTAR Tuning Console and KINGSTAR Control Panel. [KS-793] [KS-902]
- Add API functions: SDO objects of the string type **`ReadStringParameter`**, **`WriteStringParameter`**. [KS-924] [KS-969]
- Add KINGSTAR Control Panel to Help > Tools.

# Updates

- Devices can be locked in LogicLab. [KS-841]
- Improve process of aborting **`GroupInch`** and **`GroupJog`**. [KS-852]
- The UI language of Tuning Console can be changed to Chinese. [KS-902]
- Allow users to select the slave homing mode they want to use in LogicLab and Tuning Console. [KS-928]
- Add the **ksInitializeAxes** variable to LogicLab to initialize axes manually. [KS-970]
- Support Profile Velocity Mode. [KS-972]
- Use IO-Link logic only for known IO-Link masters. [KS-973]
- Improve usability of Motion settings in the KINGSTAR Demo. [KS-974]
- LogicLab update: [KS-983]
  - When ST code is running in the live-debug mode, the changing value can be viewed in the code.
  - In the **Project** panel, right-click any items and select **New variable** > **Constant**. In the **New variable** dialog box, click **Array**'s button. In **Size of variable** dialog box, select **Array/Matrix**. The **Dimension 1**, **2**, **3** can accept symbolic constants.
- KINGSTAR Soft Motion is renamed KINGSTAR Motion, and KINGSTAR Soft PLC is renamed KINGSTAR PLC. [KS-989]

- Improve **`MC_MoveContinuousAbsolute`** and **`MC_MoveContinuousRelative`**'s acc profile. [KS-991]
- Add PLC sample program to LogicLab. [KS-999]
- KINGSTAR .NET Class Sample is renamed KINGSTAR Demo. [KS-1000]
- Monitor the following error bit in status word in the CSP operation mode. [KS-1034]
- Add the **Cancel** button when users are trying to close KINGSTAR Demo. [KS-1041]
- Add GUI for Diagnosis Interface. See Tools > KINGSTAR Analysis Console > Diagnostic Tool. [KS-1088]
- **`MC_GroupJog`** and **`MC_GroupInch`** can be used only in the GroupStandby state. [KS-1112]
- Support RTX64 3.5. [KS-1172]
- In PLC function blocks, the SDO group is renamed the EtherCAT group.
- Add Diagnostic Tool to the toolbar of KINGSTAR Analysis Console.

# Fixes

- Some motion commands are not reset when motion errors occur. [KS-810]
- The axis can't be controlled through **`GroupInch`** when its initial distance is zero. [KS-962]
- **`RtEcatRestartMaster`** does nothing after being invoked. [KS-964]
- **`ConfigLinkedDevices`** is not working properly in .NET Class. [KS-965]
- **`MC_MoveContinuousAbsolute`** and **`MC_MoveContinuousRelative`** may overshoot the target. [KS-993]
- An alarm occurs on the Panasonic drive when the EtherCAT link is established. [KS-994]
- Improper **`MC_MoveContinuousAbsolute`** and **`MC_MoveContinuousRelative`**'s dec profile. [KS-997]

- **`MC_MoveVelocity`** is unable to get the velocity if the assigned velocity is larger than the application max velocity. [KS-1017]
- **`MC_Stop`** doesn't decelerate axis right away if the previous motion command is in acceleration. [KS-1022]
- TDE Macno drive can't link to the KINGSTAR EtherCAT network in KINGSTAR 3.5. [KS-1030]
- KINGSTAR doesn't monitor the Target Reached and Internal Limit Active bits in CiA 402 status word properly. [KS-1033]
- The value read from **`GetSlaveById`** represents more than two slave states. It should represent only single slave state. [KS-1064]
- No FoE commands are sent after FoE APIs are invoked if FoE is used in a non-boot state. [KS-1075]
- An error occurs when KINGSTAR PLC is turned on in KINGSTAR Control Panel due to failed pings to Virtual NIC. [KS-1079]
- In .NET API, **`PLCopen.Log`** can't record multiple axes' values. [KS-1080]
- Improve log function: [KS-1089]
  - Increase the recording time to 10 minutes.
  - Can record I/O variables.
- When the synchronized control mode is enabled, some servo drives don't move the servo motors. [KS-1138]
- **`MC_MoveAbsolute`** may not be able to complete the motion and repeatedly move axis back and forth. [KS-1144]
- The target position is calculated twice at the same cycle if the **MC_BufferMode** of queued motion commands are set to mcBuffered. In this case, the target position's value becomes large, leading to a surge in actual velocity. [KS-1150]
- **`MC_MoveContinuousAbsolute`** and **`MC_MoveContinuousRelative`**'s final velocity should be aligned with **EndVelocity** if possible. [KS-1151]

- CiA 402 related status may be wrong in the Win32 API, .NET API, and .NET Class interfaces. [KS-1157]
- The axis can't be moved after auto-restart if the control mode is different from the access mode. [KS-1173]
- Occasionally the axis state stays in Stopping after **`MC_Stop`**'s Execute has been reset. [KS-1176]
- The switch between CST and CSP modes is not stable. [KS-1200]

## Known issues

- If Error 1618 occurs during the installation or uninstallation of KINGSTAR Runtime or SDK, the installation or uninstallation terminates. In this case, RTX64 Runtime or SDK is still being installed or uninstalled in the background.
  - To completely install the KINGSTAR product, launch the KINGSTAR installer again after RTX64 components are completely installed. To check if RTX64 is installed or uninstalled, go to **Control Panel** > **Programs** > **Uninstall a program** and see whether RTX64 components appear.
  - To completely uninstall the KINGSTAR product, go to **Control Panel** > **Programs** > **Uninstall a program** and check whether RTX64 components disappear. It they do, uninstall KINGSTAR Runtime or SDK.

  Do not shut down or restart the computer during the RTX64 installation or uninstallation, it may damage the system. [KS-884]
- The drivers of Intel I219 network interface cards are not stable on RTX64. We suggest you use them for development test instead of applying them to the products.

# 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 3.5 Runtime** > **Control Panel**.
2. In the **RTX64 3.5 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 17:30, UTC+08:00, excluding holidays.