Product Release Notice

KINGSTAR 3.8

General Availability Release Date

March 30, 2020

Product Overview

KINGSTAR is an all-software, complete "plug-and-play" PC-based Machine Automation platform for IoT and Industry 4.0. Key pre-tested and pre-integrated industrial machine components include software-based motion control, machine vision, programmable logic controller (PLC) and the industry's only plug-and-play EtherCAT master that auto-discovers any vendor's EtherCAT drive, IO or device and auto-configures the EtherCAT environment at startup. Built on the EtherCAT standard and supported by a real-time 64-bit Windows operating-system (RTOS) from IntervalZero, KINGSTAR empowers engineers to design, develop and integrate machine control applications or a system of controllers on a single Industrial PC. The KINGSTAR platform can replace all hardware with software-only motion controllers and machine vision positioning systems, quickly and cost effectively.

There are two product lines – **KINGSTAR Motion** and **KINGSTAR Fieldbus**:

- **KINGSTAR Motion** replaces hardware motion cards with an all-software solution that creates PC-based machine controllers for premium precision and performance.
- **KINGSTAR Fieldbus** offers support for CANopen over EtherCAT and simplifies configuration of EtherCAT networks with its unique plug-and-play approach.

KINGSTAR Motion

New Features

- Adds velocity and path blending support to KINGSTAR Motion. [KS-1830]
- Adds the ability to set the EtherCAT cycle time in KINGSTAR LogicLab.

Updates

- Includes RTX64 3.7.1 [KS-1900]

Resolved Issues

- Resolves an issue regarding **MC_MoveVelocity** jumping to target velocity without proper interpolation when **ContinuousUpdate** is TRUE, and the velocity is the same as the last target velocity but the direction is opposite. [KS-1775]
- Resolves an issue where the value for **ControlMode** is set to -1 under the following scenarios: [KS-1803]
    1. Enable Modes of Operation using **EnableSynchronizedControlMode**, so the control mode can be changed through PDO.
    2. Connect to a drive that only allows the control mode to be changed after servo-on, such as KINCO FN880 or OMRON R88D-KN04H-ECT.
    3. Get the control mode before servo-on.
- Resolves an issue regarding velocity jumps potentially occurring at the conjunction of two adjacent commands in group motion. [KS-1880]
- Resolves an issue regarding **MC_ProbeTrigger**, **MC_TouchProbe**'s **Done** becoming instantly TRUE when **MC_TouchProbe** is executed with a Rising edge. This would cause Homing Latch to not work properly. [KS-1949]
- Resolves an issue regarding the creation of **KSLogSpace** shared memory caused a blue screen error. [KS-1956]
- Resolves an issue regarding axis and axis group's states being incorrect when a group motion command reports an error during initialization. [KS-1957]
- Resolves an issue regarding **MC_MoveLinearRelativeEx** not being able to move simulated axes, even if there was no hardware alarm. [KS-1979]
- Improves the documentation explaining the definitions of **AuxPoint** and **EndPoint** of **MC_MoveCircularRelative**, **MC_ MoveCircularAdditive**, **MC_MoveHelicalRelative**, and **MC_MoveHelicalAdditive** in **mcRadius** mode. [KS-1984]
- Resolves an issue regarding group motion not always being completed. [KS-1985]
- Resolves an issue in KINGSTAR LogicLab where German decimal and thousands separators cause numbers to be parsed incorrectly. [KS-1996]
- Resolves an issue in KINGSTAR LogicLab regarding **MC_Jog**, **MC_Inch**, **MC_GroupJog**, and **MC_GroupInch** displaying a **WrongQueueIndex** if the **Forward** or **Backward** signal was TRUE in the first cycle of the function block. [KS-1933]

- Resolves an issue in KINGSTAR LogicLab where the indexes of axes or I/O modules were not changed after modifying them from the user interface. [KS-1962]
- Resolves an issue regarding the KINGSTAR Demo failing on startup if the axes are already enabled and KINGSTAR is running. [KS-1419]

KINGSTAR Fieldbus

Updates

- Includes RTX64 3.7.1 [KS-1900]

Resolved Issues

- Resolves an issue were File Access over EtherCAT (FoE) was not working if a Bootstrap is required. [KS-1792]
- Adds missing functions **RtEcatSetDcMasterShift** and **RtEcatSetDcCheck** to the coe64ksm library. [KS-1916]

Hardware Support

KINGSTAR Motion & KINGSTAR Fieldbus have added out-of-the-box support for the following new hardware. See the *KINGSTAR Supported Hardware* document for a complete list of hardware supported by KINGSTAR.

Servo drives

- ESTUN ProNet Summa ED3S [KS-1804]

Stepper drives

- Fastech Ezi-SERVO II 4X EtherCAT [KS-1845]
- Fastech Ezi-Step II EtherCAT [KS-1845]

EtherCAT I/O modules

- Beckhoff EL3751 [KS-1736]
- Fastech Ezi-IO EtherCAT [KS-1845]

Availability

KINGSTAR 3.8 Motion and KINGSTAR Fieldbus are available beginning March 30, 2020, through Partners and by contacting KINGSTAR Sales at KINGSTARSales@kingstar.com or (781) 996-4481.

We welcome your comments and feedback. If you have any recommendations or wish to suggest product enhancements, please contact Product Management.