

# Product Release Notice

# KINGSTAR 4.5.2

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## General Availability Release Date

April 30, 2025

## 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.

KINGSTAR version 4.5.2 allows developers to select only the functionality they need. KINGSTAR’s flexibility is provided through feature packages that allow you to grow your product at any time by adding functionality to the existing KINGSTAR Runtime.

KINGSTAR Runtime feature packages:

- Core packages for: 1, 2, 3 or 7 KINGSTAR cores
- Motion Packages for: Point to Point, Synchronization, Blending, and Kinematics
- Axis Packages for: 8, 16, 32 or unlimited axis
- High Speed Timer
- Multiple Masters
- Hot Connect
- Cable Redundancy
- Programmable Logic Controller (PLC)

## New Features

- Provides support for additional hardware:
  - Stepper drives
    - MOONS: STF05-4XU-ECX [KS-5664]
  - I/O modules
    - Weidmueller: UR20\_4DI\_4DO\_PN\_FSOE\_V2 [KS-5662]
- Adds supports for Windows 11 24H2 Feature update
- Adds support for the modulo axis function in KINGSTAR RT/Win32 and .NET APIs. [KS-1533]
- The Configuration Tool now supports virtual axes with velocity up to 12,000 RPM. [KS-5661]
- The ESI Import Tool now supports automatically detecting and handling Safety I/O settings. [KS-5674]

## Issues Resolved

- The RTX64 and KINGSTAR managed code DLLs are no longer added to the Global Assembly Cache (GAC) to prevent potential Visual Studio debugging issues. [KS-5684]
- KINGSTAR .NET APIs for local calls support .NET 6 and later applications by leveraging the Windows Compatibility Pack. [KS-5688, KS-5619]
- KINGSTAR APIs:
  - Resolves an issue where MoveVelocity did not adjust to velocity override changes in the negative direction, causing huge acceleration/jerk. [KS-5605]
  - Resolves an issue where an incorrect value was returned when using the triggerInterpolationAcceleration variable of McTriggerVariableType. [KS-5681]
  - Resolves an issue where module content was corrupted during module re-ordering in a Modular Device Profile (MDP) scan. [KS-5679]
  - Resolves an issue where the AxisState incorrectly displayed axisStandStill instead of axisHoming when using the homingSlave mode. [KS-5644]
  - Resolves an issue where a motion error occurred when performing homingSlave 35 mode on an Inovance SV660 drive after the position exceeded 1,073,741,824. [KS-5675]
- Subsystem:
  - Resolves an issue where synchronization failed for all KINGSTAR instances except the first instance when using Multiple Masters. [KS-5620]
  - Resolves an issue where secondary port packet loss messages appeared when Redundancy was disabled. [KS-5680]

- Tools:
  - Resolves an issue where the ESI file did not support certain devices. [KS-5609, KS-5622]
- Hardware:
  - Resolves an issue where multiple Omron NX-ECC modules were not supported. [KS-5530]

## Availability

KINGSTAR 4.5.2 is available beginning April 30, 2025 through Partners and by contacting Sales: [sales@intervalzero.com](mailto:sales@intervalzero.com).

We look forward to any comments and feedback. If you have any recommendations, or wish to suggest any product enhancements, please contact Product Management at: [productmanagement@intervalzero.com](mailto:productmanagement@intervalzero.com).