Product Release Notice

KINGSTAR 4.5.4

General Availability Release Date

March 31, 2026

Product Overview

KINGSTAR 4.5.4 is the latest version of IntervalZero's all-software, “plug-and-play” PC-based Machine Automation platform for IoT and Industry 4.0. This release delivers enhancements and critical fixes across EtherCAT, motion control, RT/WIN32, installers, Configuration Tool, .NET APIs, and documentation, with key improvements including expanded device compatibility, improved FoE reliability, modulo axis support, and enhanced stability in subsystem startup and DC synchronization, along with updated RTX64 4.5.4 installers and clarified documentation and known issues.

New Features & Updates

Includes the latest version of IntervalZero's RTX64 4.5.4 that:

- Resolved Windows 11 24H2 OS Builds 26100.5074 incompatibility.
- Resolved Virtual Network start/stop instability.
- Resolved an issue where Windows Event Viewer displayed an internal information message "End of HalRtxInit!" during RTX64 Subsystem startup.
- Resolved memory allocation thread contention under stress conditions.

KINGSTAR Runtime:

- Updated the Runtime installer to use the RtNallGC.rtll created for I226/I225 driver update. [KS-5823, KS-5822]

KINGSTAR Subsystem:

- Added virtual Boot state for the master to flash broken devices. [KS-5821]

Configuration Tool:

- The Configuration Tool's GUI can now toggle between physical and alias-based module layouts. [KS-5764]
- Added support for displaying simulated axes and multi-axis drives. [KS-5728]
- Added support for multi-axis drives with ESI database. [KS-5729]
- Added support for enabling or prohibiting axis usage. [KS-5781]
- Added support for modulo axis configuration and testing. [KS-5788]
- Added support for reading the SDO dictionary from devices. [KS-5827]
- Added support for saving and restoring actual position offsets for selected axes. [KS-5865]

Hardware:

- Added support for NACHI's server board. [KS-5793]
- Added support for SANYO GADW and GADS servo drive. [KS-5860, KS-5871]
- Added support for Beckhoff EL6695 Software Revision 13. [KS-5842]

KINGSTAR APIs:

- Enhanced the MoP switch between CSP and PP modes. [KS-5787]
- RT/Win32: Added support for returning the current transferred byte count in *InVelocity* of the *KsCommandStatus* structure. [KS-5879]
- RT/Win32: Increased the mailbox timeout from 500 ms to 10 s for FoE transfers. [KS-5820]
- .NET Class: Added *IModule.PhysAddress* property. [KS-5770]
- .NET Class: Added the *IAxis.EnableModulo* and *IAxis.ModuloValue* properties for modulo axis configuration. [KS-5790]
- Added APIs to support the Custom Simulated Motor feature. [KS-5830]

Resolved Issues

KINGSTAR Installer:

- Resolved an issue where the VS2022 extension did not install correctly during SDK installation. [KS-5752]
- Resolved an issue where the "Enable virtual machine support" check box in the KINGSTAR Runtime installer did not create the corresponding registry value. [KS-5757]
- Resolved an issue where incorrect register parameters were created after installing. [KS-5792]

KINGSTAR Fieldbus:

- Resolved an issue where the axis velocity became abnormal when unplugging the secondary cable while EtherCAT Cable Redundancy was enabled. [KS-5892]
- Resolved an issue where *OverrideSlavePdoConfiguration* did not update the FMMU length. [KS-5890]
- Resolved an issue where drives reported errors when DC synchronization was enabled. [KS-5889]
- Resolved a DC delay calculation issue in complex EtherCAT networks that contain both DC-capable and non-DC devices. [KS-5760]
- Resolved an issue where length information was missing in asynchronous packets and incorrect in cyclic packets. [KS-5754]
- Resolved an issue where MAC addresses generated for EoE set invalid values in the reserved bits. [KS-5882]
- Resolved an issue where KINGSTAR ignored *OverrideSlavePdoConfiguration* lengths when programmatically creating a PDO mapping. [KS-5883]
- Resolved an issue where EL6695 devices failed to initialize in large network configurations. [KS-5881]

KINGSTAR Motion:

- Resolved an issue where the position overshot on trajectories with a small constant velocity segment. [KS-5755]
- Resolved an issue where *mcMotionStatusFilterDepth* misjudged the statusword bit 10 for in-target position. [KS-5749]
- Resolved an axis interpolation position overshoot issue. [KS-5769]
- Resolved an issue where *EnableSynchronizedControlMode* failed in PP mode. [KS-5880]

Tools:

- ESI Import Tool: Resolved an issue where Index increment and PDO increment values were incorrect after importing ESI files into the User Devices Database. [KS-5746]
- Configuration Tool: Resolved an issue where the simulated axis index was incorrect after exporting device settings to C++ code using the Export Settings function. [KS-5727]
- Configuration Tool: Resolved an issue where disabling the alias feature caused the exported code to contain duplicate variables and fail to compile. [KS-5826]
- Tracealyzer: Resolved an issue where Tracealyzer diagnostics tool did not work in KINGSTAR when both the SDK and Runtime were installed on the system. [KS-5902]

Hardware:

- Resolved an issue where segmented transfers did not work with JAT drives. [KS-5763]
- Resolved mode-switching issue with Schneider's drives. [KS-5762]
- Resolves an issue where BoschRexroth could not run as EtherCAT initially and stuck in *SafeOP.* [KS-5761, KS-5753]

Availability

KINGSTAR 4.5.4 is available starting March 31, 2026 through Partners and by contacting Sales at 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.