

# Simplify and support EtherCAT network configuration and development

KINGSTAR Fieldbus powered by EtherCAT provides support for CANopen over EtherCAT and simplified configuration of EtherCAT networks. Using a powerful runtime that transforms Windows into a real-time operating system (RTOS), you can interchange any servo drives and I/O devices to auto-configure the EtherCAT network.



## REDUCE COSTS

Replace hardware with software to reduce machine control costs by 25-50%.

## SPEED TIME-TO-MARKET

Improve productivity with EtherCAT auto-configuration.

## IMPROVE UX

Build a powerful UI with a world-class Windows Interface (HMI).

## ENHANCE PERFORMANCE

Improve performance and control by using the PC NIC, Ethernet cables and EtherCAT

## SCALE DYNAMICALLY

Auto-configure EtherCAT network when swapping any servo drives and I/O devices.

## EXTEND EASILY

Add any 3rd party protocols or open-source libraries with no vendor lock-in.

## KINGSTAR Fieldbus powered by EtherCAT provides the most comprehensive set of software-only components:

### CANopen Over EtherCAT Support

Replace proprietary network protocol and I/O hardware with PC NIC and Ethernet cables.

### Auto-Configuration

Utilize a single configuration environment with pre-integrated EtherCAT servo drives and I/O devices for plug-and-play compatibility.

### Hard Real-Time Determinism

Use IntervalZero's RTX64 hard real-time SMP aware subsystem for determinism on Windows.

### Single Development Environment

Develop Visual Studio custom applications using RTX64 libraries in C or C++.

### SDK & Libraries

Leverage robust libraries that deliver functionality for EtherCAT configuration and support.

### Standalone Controller

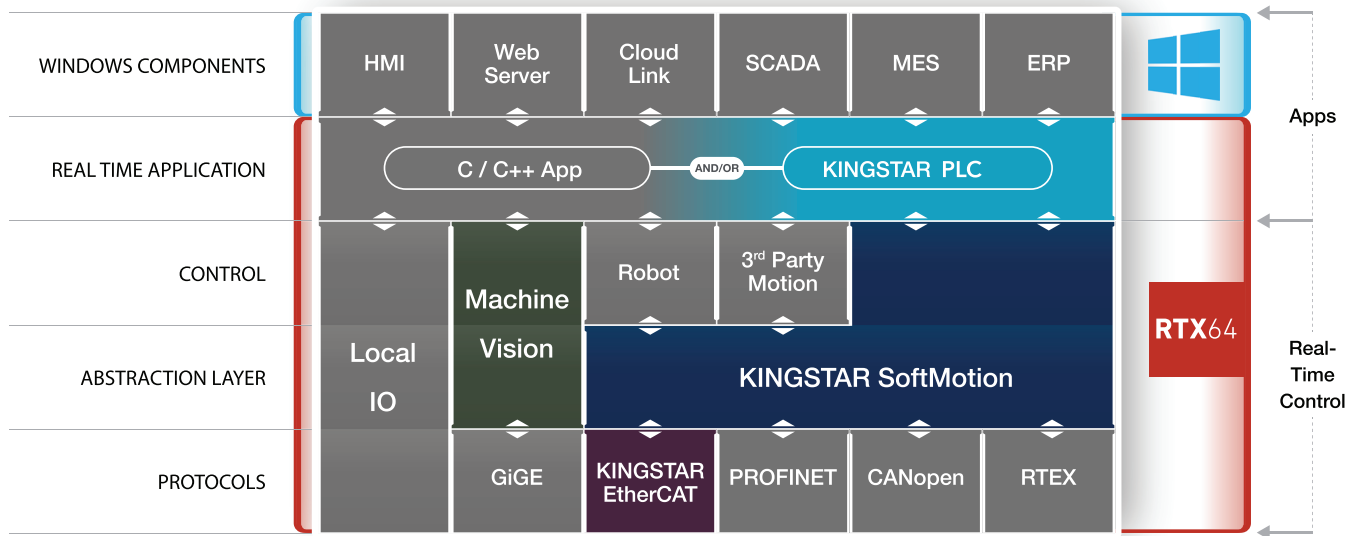
Consolidate, run and synchronize multiple independent systems, across multiple cores, on a Windows and RTX64 processor system.

### User Interface

Create powerful UIs with Windows Interface (HMI).



Integrate software of your choosing to create customized, real-time, high-precision applications.



### KINGSTAR Fieldbus Professional & Entry

- Integrate any motion control API for real-time precision, and accessible from Visual Studio
- Built on IntervalZero’s latest RTX64 RTOS for real-time determinism
- Transform Windows 10 IoT into an RTOS and use Microsoft’s Azure Cloud as a backend for motion control needs
- Scan the EtherCAT fieldbus for list of added or existing slave devices and automatically configure for use, without starting the master
- Use OPC UA for secure, open and reliable data communication

### KINGSTAR Fieldbus Professional

- Enable coordinated motion at 125 microsecond intervals
- Up to 3 cores for dedicated motion control

### KINGSTAR Fieldbus Entry

- Support uncoordinated motion at 1 millisecond
- 1 core for dedicated motion control

### Part of the KINGSTAR Machine Automation Platform

The KINGSTAR Machine Automation Platform is an open and standards-based, integrated platform that enables motion control and machine vision engineers to design, develop and integrate precision motion control and machine vision applications with either KINGSTAR’s soft motion library and software PLC or 3rd-party software of their own choosing. It is built on the foundation of EtherCAT and a real-time 64-bit Windows operating system, and is a complete platform for functional integration

