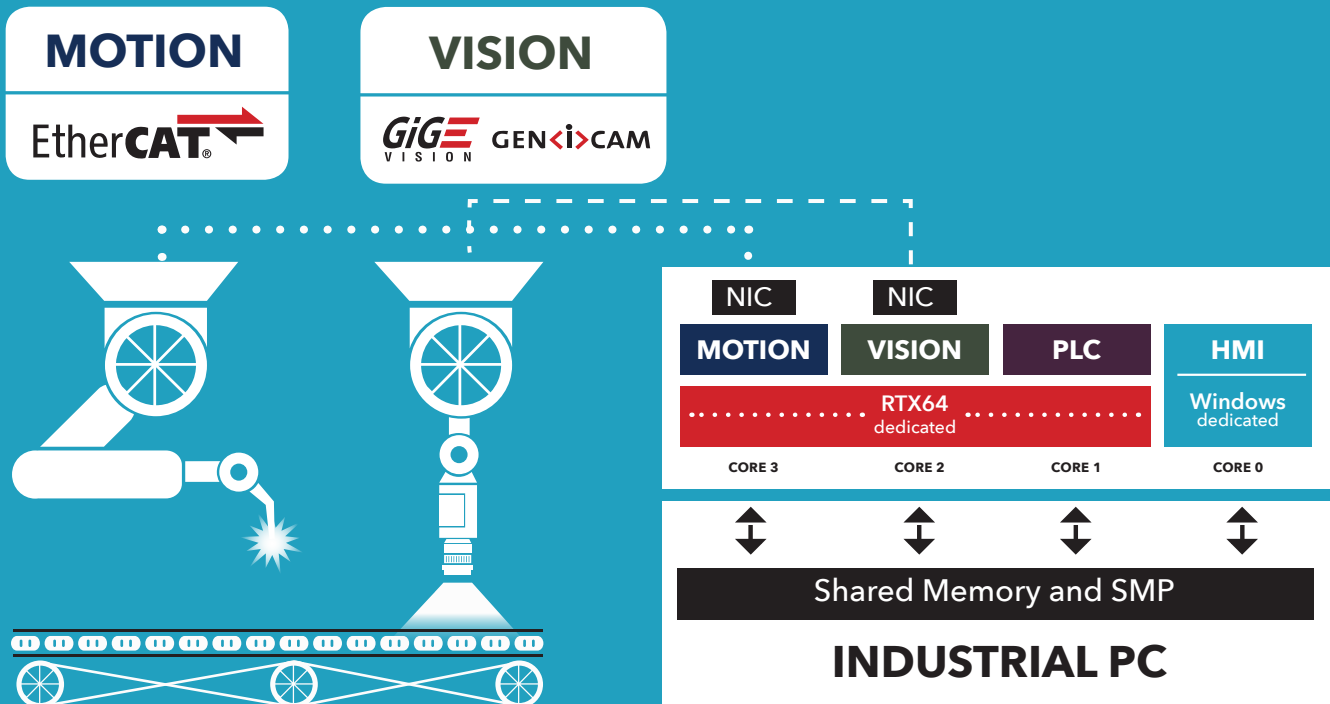


# Deliver precision motion positioning with affordable, industrial-grade software

KINGSTAR Soft Motion is a complete software solution that creates PC-based machine controllers with premium precision and performance. Using a single industrial PC enhanced by the power of a real-time operating system (RTOS) for Windows, and leveraging the CANopen over EtherCAT standard, you can deliver a software-only motion control and positioning system quickly and cost effectively.



## REDUCE COSTS

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

## SPEED TIME-TO-MARKET

Improve productivity with pre-integrated motion libraries and 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 infrastructure.

## EXTEND EASILY

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

## SCALE DYNAMICALLY

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

## KINGSTAR Soft Motion 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 cabling.

### 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 managed code .NET framework, native Windows, or RTX64 libraries in C or C++.

### SDK & Libraries

Leverage robust libraries that deliver functionality for EtherCAT, servo and I/O modules, motion and trajectory, electronic CAM, and PLC ladder logic.

### Standalone Controller

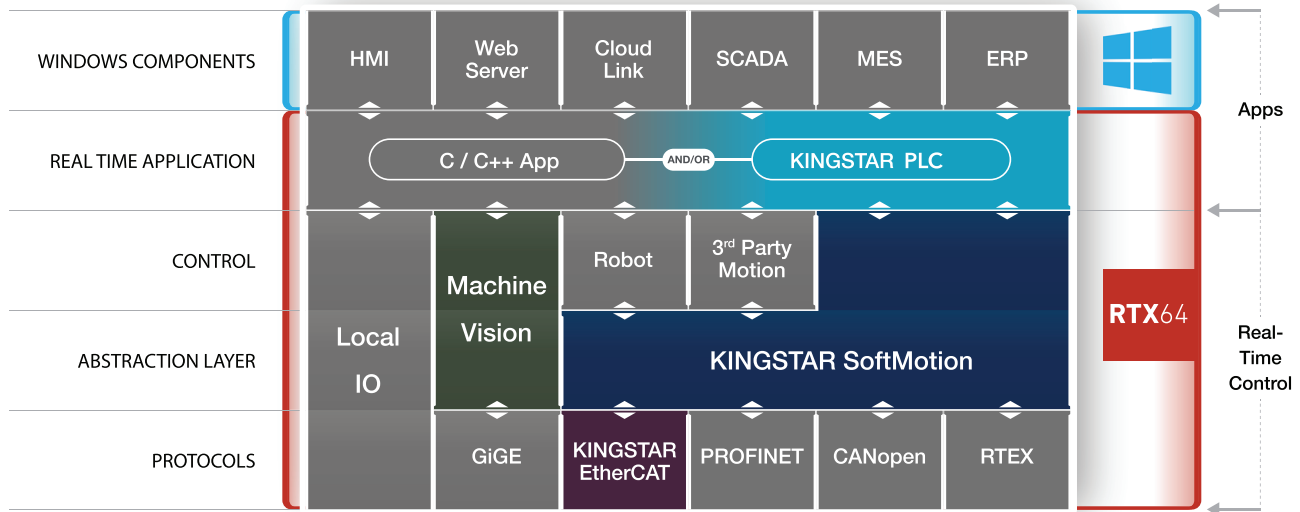
Consolidate, run and synchronize multiple independent systems, across multiple cores, on a Windows and RTX64 processor system.

### User Interface

Create powerful UIs with Windows Interface (HMI).



# Design, develop, and integrate motion control applications with software-only PC-based controllers for industrial machines.



## KINGSTAR Soft Motion Professional & Entry

- 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
- Integrate with KINGSTAR PLC powered by Axel to simplify app design and development

## KINGSTAR Soft Motion Professional

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

## KINGSTAR Soft Motion 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.

