

# KPA Motion

## Software for Motion Control

KPA Motion is a library set used in software motion to turn any device to motion controller using position, velocity or torque control. KPA Motion is specially designed for automation industry, medicine, and other fields, where it is necessary to control the moving parts of equipment, for example, for numerical control (CNC) machines. KPA Motion is implemented according to PLCopen specifications.

## Benefits and key features

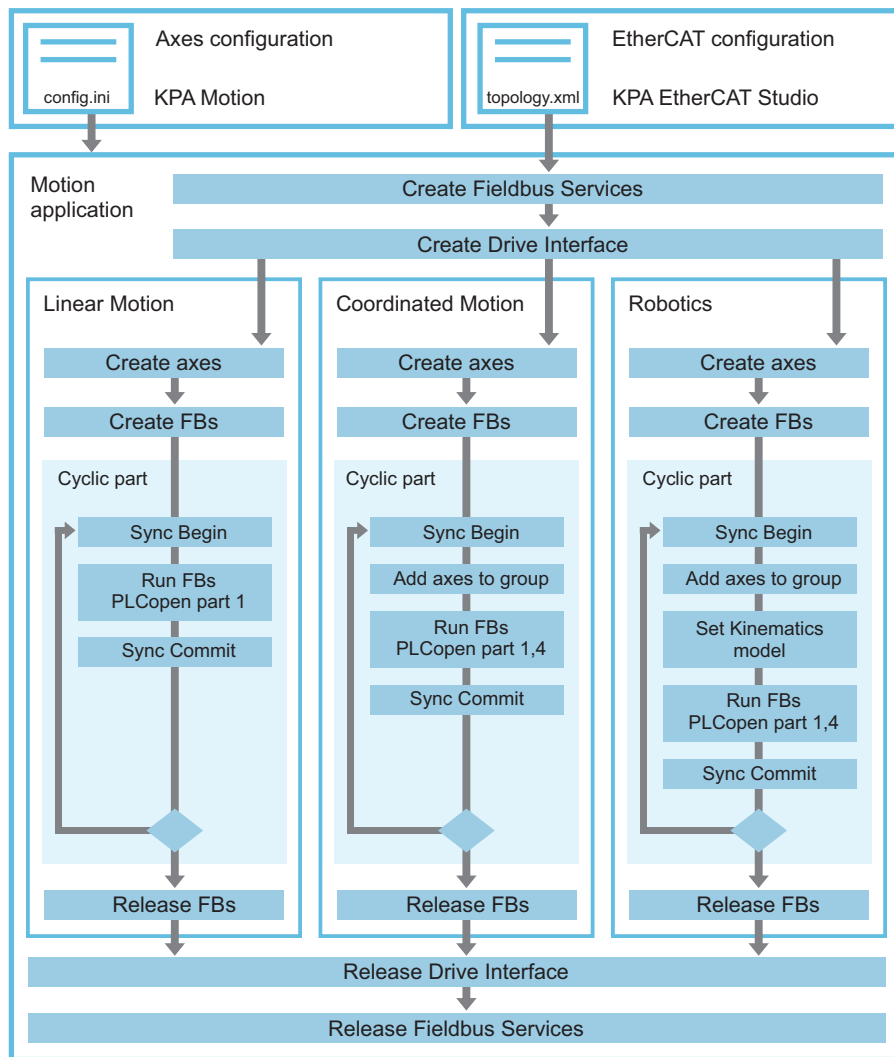
- **3D-axis, synchronized axis and single-axis motion control**  
KPA Motion provides the opportunity to create custom applications for managing portal systems and 3D-axis motion with complex trajectories.
- **Time-optimal trajectory generation on the fly**  
Internal algorithms of KPA Motion allow to generate time-optimal trajectories at each motion cycle.
- **Jerk-limited**  
KPA Motion helps to reduce equipment wear, acoustic noise, and loads amplitude in motion.
- **Adaptation to any operating system**  
KPA Motion is compatible with various systems due to developed Operating System Abstraction Layer (OSAL).
- **Bus Abstraction Layer**  
Bus Abstraction Layer (BUSAL) allows to interact with drivers based on various profiles, such as CiA402/DS402, SERCOS and PROFIdrive.
- **Available for various CPUs**  
KPA Motion offers multi-thread processing for multi-core CPUs and is also optimized for low-end CPUs.
- **Native fieldbus integration**  
Filed bus control loop integration allowing an immediate reaction for precise motion control and a new trajectory generation according to possible events from sensors and vision. EtherCAT support is provided by a comprehensive own-developed master driver.
- **Meets industry standards**  
koenig-pa GmbH is a voting member of PLCopen Group. KPA Motion supports PLCopen specifications with additional extensions.

# Workflow

KPA Motion is delivered as an archive, which includes documentation, header files, libraries and examples.

Remote usage of product capabilities is provided by proxy development kit. KPA Motion allows to control drives using a non-real-time OS on the client side due to motion control performed in a real-time OS on the server side.

KPA Motion is complemented with Motion Configurator – a plug-in of KPA EtherCAT Studio, which allows to create configuration, check it and generate configuration files for custom applications.



## Custom Development

koenig-pa GmbH offers specific software development for customers who require additional support for integrating our products into their applications or solutions.



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