

KPA Motion

Software for Motion Control

KPA Motion Control Library is a library used in software motion to turn any device to motion controller using position, velocity or torque control. KPA Motion Control Library 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 Control Library is implemented according to PLCopen specifications.

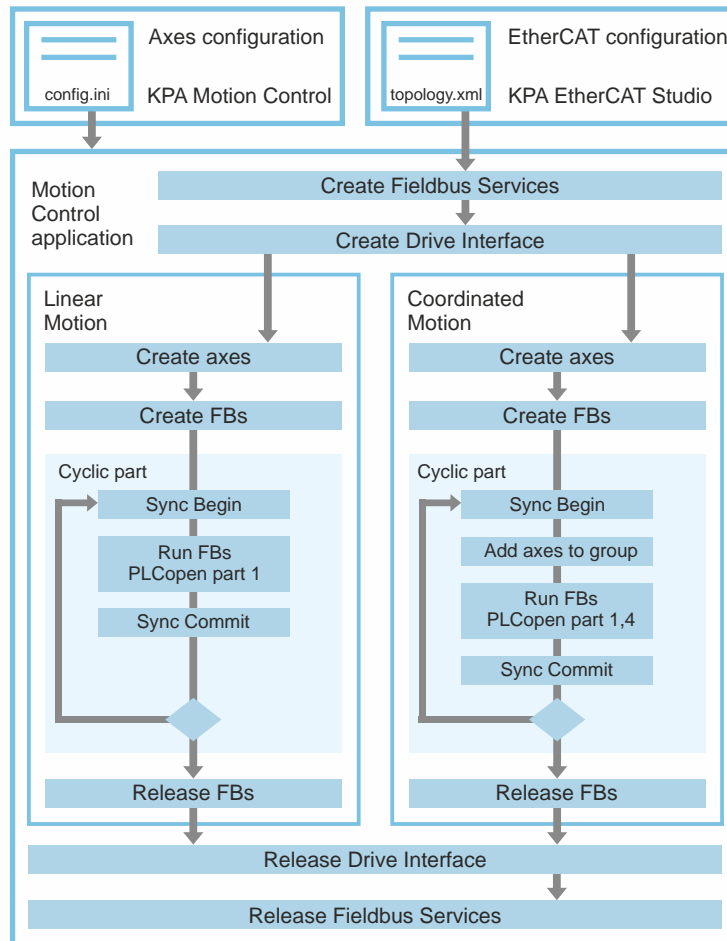
Benefits and key features

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

Workflow

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



KPA Motion Proxy

KPA Motion Proxy is an add-on to KPA Motion Control Library that allows to transfer control logic of the real-time application to the non-real-time system. It means, that this add-on provides remote control of real-time motion application. The addition consists of two parts: client (works on non-real-time system) and server (works on real-time system). KPA Motion Proxy is a bridge for GUI interfaces which allows to increase application interactivity and to improve visualization of the application.



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