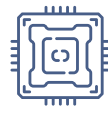
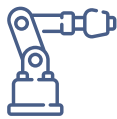




Your Automation expert



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koenig-pa GmbH



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company specialized in creating customized and sophisticated products for automation systems

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years
on market

koenig-pa GmbH specializes in creating customized and sophisticated products for automation systems.

1000

automation
projects

For more than 20 years, koenig-pa GmbH has developed and installed more than 1000 advanced process control systems for chemical treatment lines of Atotech, our strategic business partner, using fastCenter SCADA system as a software platform.



koenig-pa GmbH joined the EtherCAT Technology Group (ETG) in 2004. EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.



koenig-pa automation products rely on the standard communication protocol OPC for internal data exchange. For integration and external communication, both OPC and SECS/GEM protocols are available. For our Motion library, we selected PLCopen standard as a basis for the architecture and programming interface.

SECS/GEM



16

export
countries

We provide our products to the world leading companies in various fields, such as industrial automation, CNC & machines, robotics & drive, education and electronics.

7

distributors
worldwide

All our products can be bought directly from us or from our international distributors in China, France, India, Italy, Japan, South Korea and the USA.



koenig-pa GmbH Quality Management System is certified according to DIN EN ISO 9001:2015 (initial certification in 2008) and applies to all products and services. The activities are controlled in accordance with the commitments of our quality management system view from order entry through after sale support.

Milestones

- 2021** ■ KPA Automation 4.3
Alarm Library Service (ALS)
ALS Configurator
- 2020** ■ KPA Automation Data Analytics
KPA Automation 4.2
KPA Automation softPLC
- 2019** ■ KPA Automation Server
KPA Automation Straton NC
RPCClient SDK for Linux
KPA EtherCAT Master 2. Autoconfiguration
KPA Master Redundancy. Xilinx Zynq/US+ IP Cores
KPA EtherCAT Master 2. TimedSend mode
- 2018** ■ KPA Master Redundancy patent (US 10.102.163 B2)
KPA Master Redundancy. Texas Instrument Sitara PRUSS
KPA Automation View. KPA Automation Studio
KPA Ether CAT Master, Virtual COM drive
KPA 4-CAN EtherCAT Gateway. Smart CAN filter
KPA EtherCAT Master. Virtual COM driver
KPA PCIe card. Cable Redundancy & Distributed clock
KPA EtherCAT Master 2. PI logger
ISO 9001:2015 certification
PLCopen membership
- 2017** ■ KPA Motion 1.2
Xilinx US+ (Ultrascale plus platform) with FreeRTOS
KPA EtherCAT Master 2.1
KPA Motion. BUS Abstraction layer (BUSAL). KPA Proxy
KPA EtherCAT Master 2: modules, async, pi driven
- 2016** ■ KPA EtherCAT Slave, Ti C2000, PHYTEC Am335x
KPA PCIe. Slave/Sniffer
KPA EtherCAT Master RTX64 3.0, RTX 2016, SYS/BIOS
KPA EtherCAT Master 2.0, VxWorks 7.0, INtime
KPA EtherCAT Studio 2.0, Studio development framework
KPA Automation Prototype
- 2015** ■ KPA EtherCAT Master for T-Kernel, Zynq, Cyclone
KPA EtherCAT Master Ti Sitara, Xenomai 3.0
KPA EtherCAT Master INtime 6, QNX 6.6, RTX 2014, RTX64, VxWorks 6.9
KPA EtherCAT Master. IP Cores for Zynq (Xilinx) & Cyclone V (Altera/Intel FPGA)
KPA Motion for EtherCAT. Function blocks
- 2014** ■ KPA EtherCAT Master 1.6
- 2013** ■ KPA Motion for EtherCAT. KPA 4-CAN EtherCAT Gateway
KPA EtherCAT Studio. MDP Profibus plug-in (PCT replacement)
- 2012** ■ Freescale, QNX, ISaGRAF and koenig-pa GmbH launch "PLC in a Box"
MDK for Xenomai
Concurrent's SIMULATION Workbench™ Real-time Modeling Environment with
KPA EtherCAT Master
- 2011** ■ KPA EtherCAT Slave in embedded System
- 2010** ■ Company re-branded as koenig-pa GmbH
KPA EtherCAT Stacks on Freescale Technology Forum 2010 - Orlando, FL
KPA EtherCAT Master. CANInterface driver for EI6751
SECS/GEM protocol support
- 2009** ■ Xenomai, QNX support
- 2008** ■ KPA PCI Board, KPA PC104 Boards, Intime
ISO 9001:2008 certification
- 2007** ■ KPA EtherCAT Slave, RTX. VSDO-8 / VSDI-8
KPA EtherCAT Studio for Windows (.NET)
Profibus Configuration tool
- 2006** ■ VSAO-4 / VSAI-4. VSLC-1 (line scan camera). VSCS-16
- 2005** ■ KPA EtherCAT Studio for Linux
KPA EtherCAT Master
- 2004** ■ Joining EtherCAT Technology Group (ETG)
- 2003** ■ fastCenter SCADA platform
- 2000** ■ OPC Foundation membership
- 1996** ■ Start of the industrial SCADA software development
- 1986** ■ Foundation of König Prozeßautomatisierungs GmbH

KPA EtherCAT Master

EtherCAT network control

KPA EtherCAT Master is a software stack, which corresponds to all EtherCAT Technology Group standards and has numerous features, which can be used for developing of cost-optimized and powerful PLC on almost any platform (such as arm/arm64 or x86/x64) to control EtherCAT I/O produced by any vendor.

Benefits and key features

■ Meets EtherCAT Technology Group (ETG) standards

KPA EtherCAT Master can be delivered as standard or customized feature packages. Two standard packages are available according ETG.1500 standard: Class A (Standard package) and Class B (Basic package). Moreover, koenig-pa GmbH introduces Premium package, which integrates various additional features for creating innovative applications.

■ Available for numerous operating systems, as well as OS-less systems

KPA EtherCAT Master is available for numerous operating systems, including Windows, INtime, RTX/RTX64, Linux, Linux+Xenomai, FreeRTOS, Nucleus, QNX, VxWorks, ReWorks, Integrity, as well as OS-less systems. Upon request, koenig-pa GmbH experts can adjust support for any operating system.

■ Hardware extensions for Xilinx/Intel FPGA (Altera) and Texas Instruments PRUSS Sitara CPU

Availability of IP Cores for Xilinx and for Intel FPGA (Altera) FPGAs, PRUSS co-program for Texas Instrument Sitara CPUs (AM47x and AM57x) increases productivity and data processing efficiency. Implementation for AM6x is available upon request.

■ Auto Configurator for online configuration

KPA EtherCAT Master can configure bus on the fly without EtherCAT configuration tools. The Auto Configurator module allows a user application to select slave's configuration and to switch between different configurations of the slave, for example, between position control of a drive and velocity control, or between bus configurations with a different number of slaves.

■ Process image logging for data transferring into analytic tools

Process image (PI) logger allows to collect real-time data for transferring to other levels without influence on real-time behavior of the control system. Data can be transferred to MATLAB, LabView (TDMS format), and any other analytic tools. Moreover, koenig-pa GmbH has designed a special Python extension, which allows to aggregate data into a file of any format, for example a CSV-file, for its further processing.

Feature packages

Features	Basic	Standard	Premium
Process Data Exchange	●	●	●
Network Configuration	●	●	●
Mailbox support	●	●	●
CoE	●	●	●
FoE	●	●	●
Synchronization with Distributed Clock (DC)	○	●	●
DC support	●	●	●
Time distribution (Slaves synchronization)	●	●	●
Slave-to-Slave Communication	●	●	●
Explicit Device Identification	—	●	●
EoE	—	●	●
SoE	—	●	●
AoE	—	●	●
VoE	—	●	●
Continuous Propagation Delay compensation	—	●	●
Sync window monitoring	—	●	●
Synchronization of Master with Slaves	—	●	●
Feature Packs			
FP External Synchronization	—	○	○
FP Cable redundancy	○	○	●
FP Hot Connect	○	○	●
FP Mailbox Gateway	○	○	●
KPA Extensions			
Data logger	○	○	●
Frame logger	○	○	●
PI Snapshot	○	○	●
Events handler	○	●	●
PI logger	○	○	○
CAN DBC driver	○	○	○
VCOM driver	○	○	○
Online configuration	○	○	○
KPA Master redundancy	○	○	○
Optimized drivers and HW Extensions	○	○	○
Hardware timed send	●	●	●

- Included in the delivery set
- Not included in the delivery set
- May be included in the delivery set

Custom Development

koenig-pa GmbH offers specific software development for customers who require additional support for integrating EtherCAT capabilities into their applications or solutions. Our company has extensive experience in fieldbuses, embedded systems, real-time operating environments, industrial automation solutions for various fields of application.

KPA EtherCAT Slave

Software stack for device development facilitation

KPA EtherCAT Slave is a software stack, which is developed to run on microcontrollers, CPUs, or DSPs with or without any operating system (OS) and is especially designed to minimize time to market for companies that want to be a part of dynamically increasing EtherCAT market.

Benefits and key features

■ Meets EtherCAT standards

KPA EtherCAT Slave stack supports all features defined in EtherCAT standards. Each new version of the stack is verified with the latest released and all internal versions of the EtherCAT Conformance Test Tool (CTT) due to koenig-pa GmbH is a member of Technical Working Group Conformance.

■ Portability

KPA EtherCAT Slave stack may be presented as a software stack with embedded Hardware Abstraction Layer (typically implemented through OSAL and driver part), which can be used for simple support of any EtherCAT ASIC and communication interface (PDI) between ASIC and a microcontroller.

■ Optimized memory usage for embedded platforms

Used RAM size depends on application design and the size of the Object Dictionary (OD). For example, in case of static OD usage (a build based on source code):

RAM size:

- ≥ 3 KB for Basic package
- ≥ 8 KB for Standard package

ROM (flash) size:

- ≥ 55 KB for Basic package
- ≥ 64 KB for Standard package

Moreover, to minimize a final size of the application, KPA EtherCAT Slave stack may be customized by editing the configuration file, for example, it is possible to deactivate Mailbox EoE, Mailbox VoE and Mailbox FoE.

■ Support

In comparison with non-commercial or open source EtherCAT slave stacks, koenig-pa GmbH offers support for 1 year.

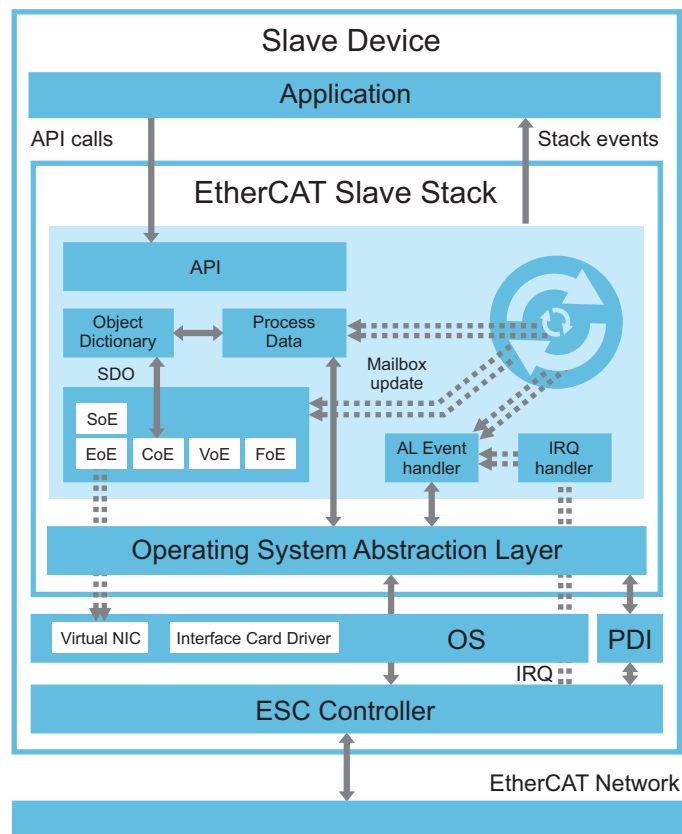
Feature packages

Standard

- Mailbox protocols: CoE, EoE, FoE, SoE, VoE
- Runtime generation and changing of the OD
- Adapted to operating system by using Operating System Abstraction Layer (OSAL)
- Virtual Ethernet card support for EoE (depending on OS)

Basic

- Mailbox protocol: CoE
- Static OD with pointer given from application
- With or without Interrupt Service Routines (ISR)



An EtherCAT Slave stack package may include a set of ready solutions for specific platforms and operating systems, such as:

Platforms:

- XMC4800 (Infineon)
- Microblaze (Xilinx)
- Sitara AM335x with ESC PRU (Texas Instruments)
- C2000 (Texas Instruments)
- STM32 (ST)
- NIOS II (Intel FPGA/Altera)

Operating systems:

- Linux (with/without RT-Preemption patch)
- Linux + Xenomai
- QNX
- No OS

KPA EtherCAT Studio

EtherCAT configuration tool

KPA EtherCAT Studio is a second generation of a user-friendly tool for EtherCAT bus configuration and diagnostics. This lightweight, high-performance standalone Windows application natively supports all the advanced features of KPA EtherCAT Master.

Benefits and key features

■ Meets EtherCAT Technology Group (ETG) standards

KPA EtherCAT Studio is compliant with EtherCAT Technology Group (ETG) standards and can create ENI (EtherCAT Network Information) files for EtherCAT masters from various vendors.

■ Extended Slaves Library

Slaves Library is a list of available ESI (EtherCAT Slave Information) files, which can be used to build up the project configuration. KPA EtherCAT Studio provides an opportunity to work with several Slaves Library collections, change an active collection by using a custom collection and manage Slaves Library view by setting user attributes for slaves.

■ Remote Slaves Library

KPA EtherCAT Studio allows connecting Local Slave Libraries to the Remote Slaves Library. The Remote Slaves Library centrally stores the latest correct data and ensures protection from uncontrolled data editing which may cause system errors.

■ Several feature package modifications

KPA EtherCAT Studio is delivered as a Basic, Standard, Premium or customized feature packages depending on customer's demands.

■ Available for integration

KPA EtherCAT Studio can be integrated into any custom application using .NET Remoting.

■ Customization of features in the package

In the delivered package, features can be activated or deactivated according to the customer need. Moreover, there is a possibility to customize brand data, such as a product name, logo, copyright and contacts.

■ Problem diagnostics

KPA EtherCAT Studio includes system problem diagnostics, which provides clear data interpretation for further successful problem solving.

Feature packages

Features	Basic	Standard	Premium
Studio			
Scaling Signal Values	●	●	●
Automation interface	—	●	●
Slaves Library	●	●	●
Studio/Emergency Output	●	●	●
Watch Viewer	●	●	●
Master Output	—	●	●
Plug-ins for configuring specific devices			
CANopen Master/Slave (EL6751)	●	●	●
Profibus slave (EI6731)	●	●	●
Bridge terminals (EL6692/EL6695)	●	●	●
Modular Devices	—	●	●
Virtual Serial COM	—	—	●
MDP Profibus Master Gateway Profile 3100	○	○	○
Tools			
Topology Viewer	●	●	●
Snapshot Viewer	●	●	●
Chart Viewer	●	●	●
Diagnostic scanner	●	●	●
S2S Communication Editor	●	●	●
EEPROM Editor	—	●	●
Comparing tools	—	—	●
Data logging tools	—	—	●
Common			
DC	●	●	●
Tasks/Sync Units	●	●	●
Power calculation via LVDS	—	—	●
Master			
Cyclic Commands	●	●	●
ENI Export	●	●	●
External task	●	●	●
PI Alignment	—	●	●
Master Watchdog	—	●	●
Master Mailbox. AoE	—	●	●
Master Mailbox. EoE	—	●	●
ENI Export. XSLT Scheme support	—	●	●
Cable Redundancy	—	—	●
Slave			
Slave Mailbox. CoE	●	●	●
Slave Mailbox. FoE	●	●	●
Slave Watchdog	—	●	●
Slave Mailbox. AoE	—	●	●
Slave Mailbox. EoE	—	●	●
Slave Mailbox. SoE	—	●	●
Configuring Init Commands	—	●	●
FMMU/SM	—	●	●
Direct Memory access	—	●	●
Direct EEPROM access	—	●	●
Explicit identification	—	●	●
Hot Connect	—	—	●

- Included in the delivery set
- Not included in the delivery set
- May be included in the delivery set

KPA Master Redundancy

Network protection from control system failure

Inbuilt EtherCAT functionality of cable redundancy cannot protect the control system, where control application with EtherCAT master is launched, from restart, disconnection or failure.

KPA Master Redundancy is koenig-pa GmbH patented technology, which resolves mentioned problems and allows to stay operational even in synchronized environment.

Benefits and key features

■ Unique technology for network protection from control system failure

koenig-pa GmbH patented technology (patent № US 10,102,163 B2) – Master Redundancy – provides unique fault tolerance to resist possible control system failures.

■ Support of any network topology

Master Redundancy supports a network of any topology, such as a ring, a star, and a daisy chain.

■ Unlimited number of control system units

Master Redundancy can be used for unlimited number of control system units. It is possible to enable multiple redundant masters without collision when two or more passive masters attempt to start the failover protocol.

■ Cost-effective solution

For stable system operation, there is no need to use expensive equipment such as a real-time Ethernet switch.

■ Prompt response to system failures

Redundant master can take the control immediately without any dedicated control device, additional signal lines or manual control.

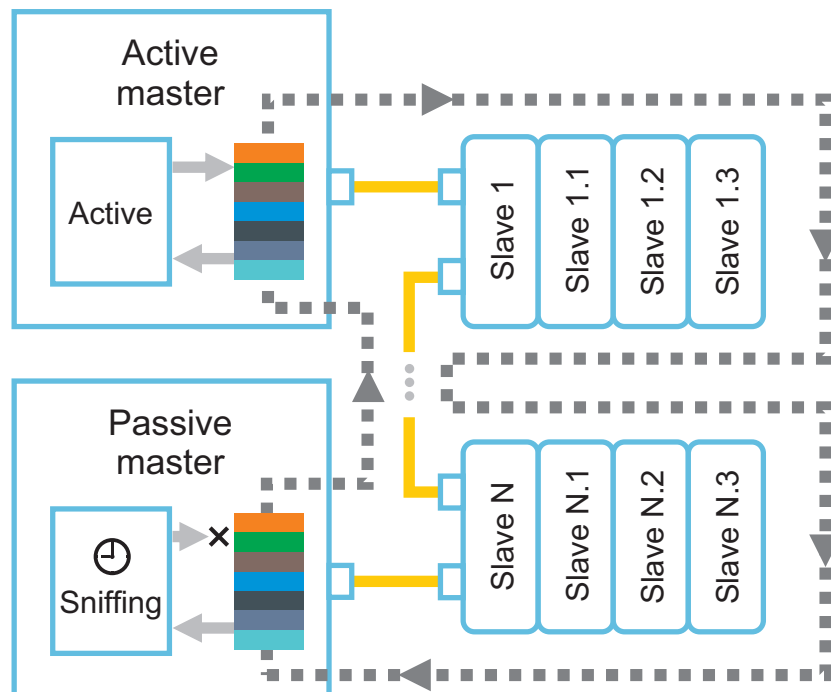
■ Adaptation to any EtherCAT master

Any EtherCAT master can be adopted to support Master Redundancy.

Workflow

EtherCAT configuration with enabled Master Redundancy consists of an active master device and one or several passive masters.

Master is an agent, which cyclically creates a data telegram, fills it with requests, and sends it to the bus in strict time intervals. A data telegram is common to all slave devices connected to the bus, and it passes from one device to another.



This feature is extremely useful for fault tolerance: any device connected to the bus is fully aware of slave's activity and can transparently acquire, or sniff, the data, which is transferred between master and slaves. There is no need to modify any slave devices, to add any additional signals, or to change the transfer protocol.

During a normal operation, redundant master is passive, sniffs data, and doesn't enter its own telegrams. As all passive masters are consistent with the bus activity, they are ready to take place of active master anytime, when it fails.

When passive master is not getting a telegram he expects, he knows that the bus has no master anymore. There is no need to wait until the current cycle is over – redundant master can take control immediately, posting his own telegram. And this telegram will be correct and meaningful, because passive master was tracking the same changes with failed active master.

KPA Motion

Software for Motion Control

KPA Motion is a library set used in software development for position control devices. 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.

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 EtherCAT bus support**

EtherCAT bus support is provided by a comprehensive own-developed master driver.

- **Meets industry standards**

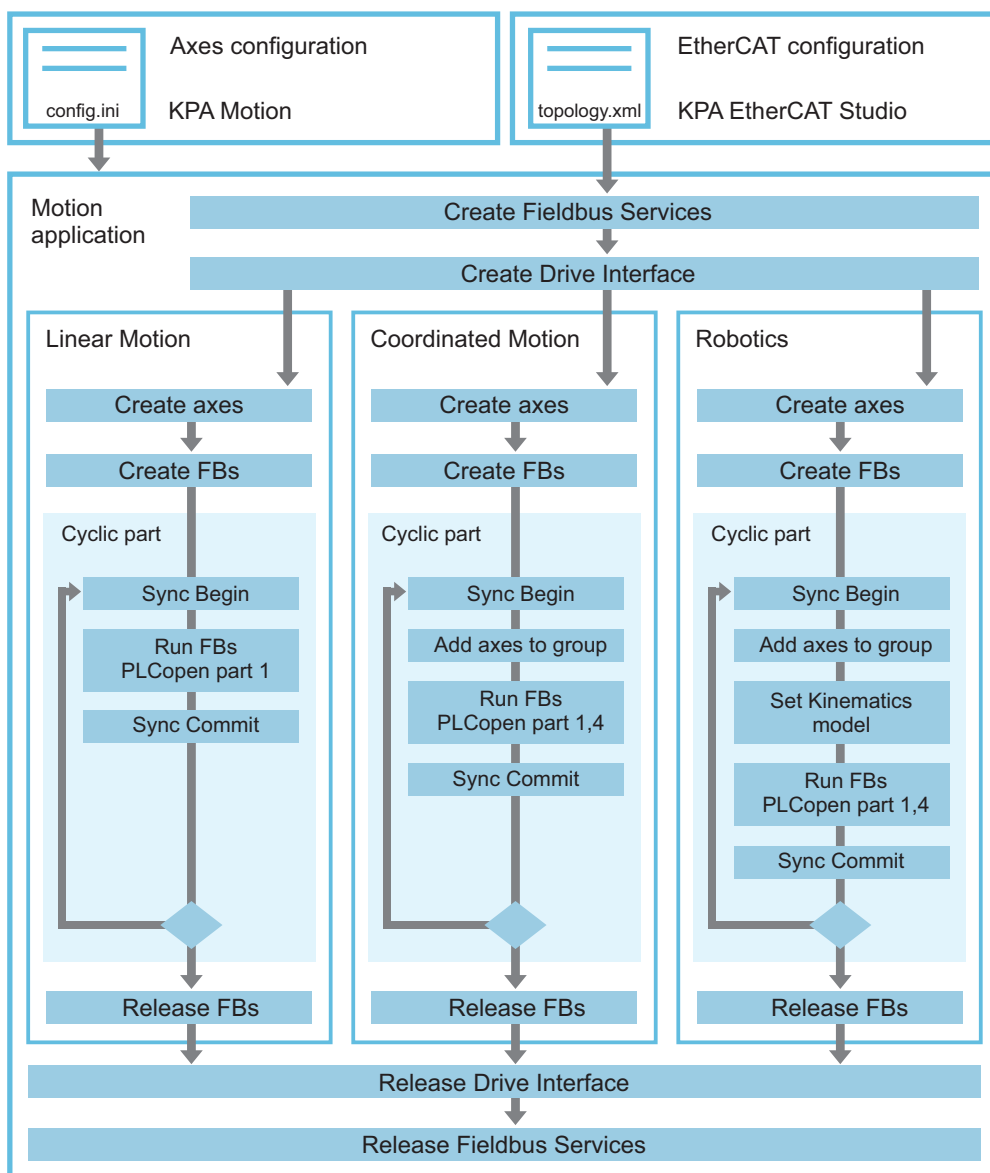
koenig-pa GmbH is a voting member of PLCopen Group. KPA Motion supports PLCopen specifications with additional extensions.

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.



KPA Automation View

Advanced HMI runtime

KPA Automation View is a powerful solution for human-machine interfaces (HMI) with design tools for programming each interface control.

Benefits and key features

■ Unlimited possibilities for creation complex interfaces

In KPA Automation View, there are no limits on the number of created screens and data tags. Moreover, static and animated graphics are available, so that objects can change appearance according to PLC tags values.

■ User access control and logging

KPA Automation View provides a wide range of user access settings. All user actions are logged.

■ Connection to various types of PLC

Data is transferred between PLC and KPA Automation View through OPC UA, OPC DA Classic or custom TCP-based protocols. Other protocols are supported using KPA Automation Server.

■ Additional features of data storage, export and report generation

KPA Automation View offers data storage, report generation of the current system state, data export in CSV and HTML file formats, and work with databases (read from or write into MS SQL and MySQL).

■ Suitable for CFR 21 Part 11 compliant systems

Title 21 Part 11 of the Code of Federal Regulations (CFR) establishes the United States Food and Drug Administration (FDA) regulations on electronic records and electronic signatures. CFR 21 Part 11 applies to medical device manufacturers, biotech companies, biologics developers, and other FDA-regulated industries.

■ Multi-HMI support

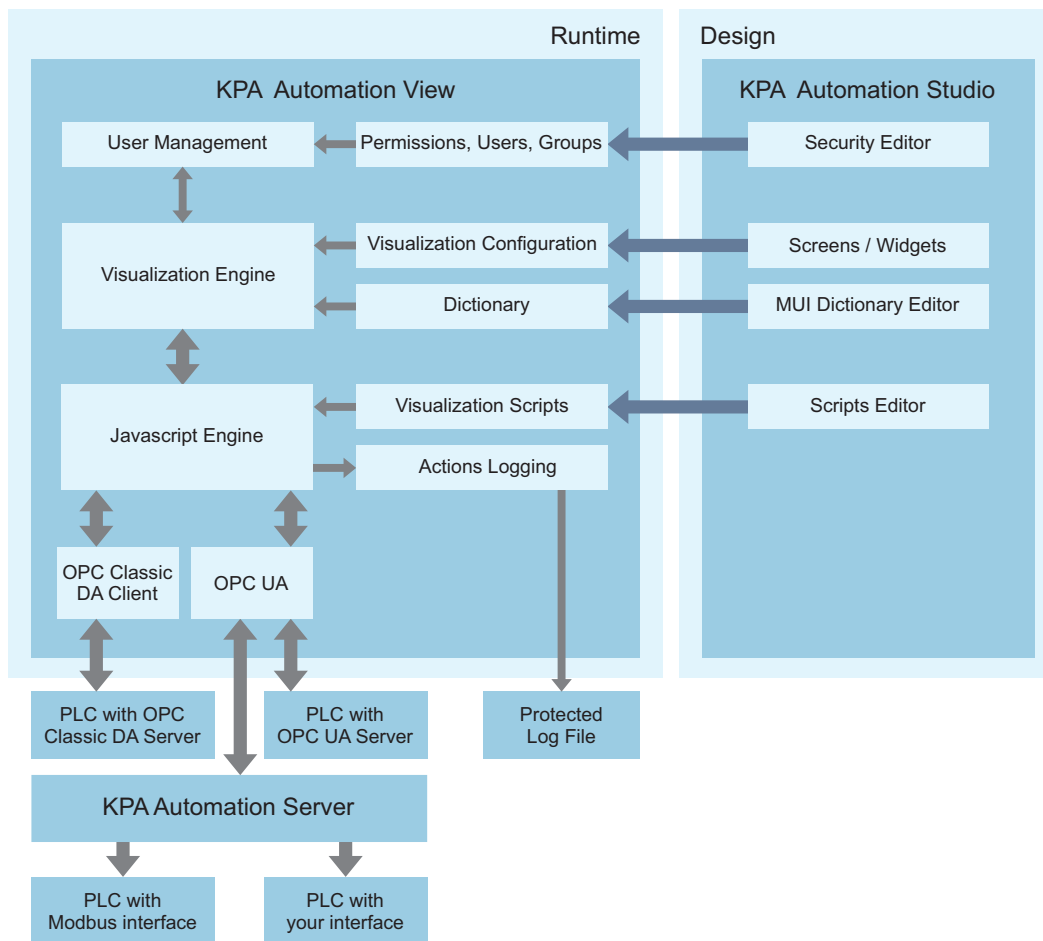
KPA Automation View can run on several Windows-based PCs.

Workflow

The delivered package of KPA Automation View includes **KPA Automation Studio** – integrated development environment with user-friendly, drag-and-drop user interface for programming appearance and behavior of HMI controls.

KPA Automation Studio provides the following features:

- Extendable library of controls, styles, and scripts
- Vector graphic editor
- Import and export of objects and resources
- Script debugging



KPA Automation View is available for Windows 7 Professional and Windows 10 IoT operating systems. On demand, koenig-pa GmbH offers images of these operating systems, which ensure consistent work of KPAAutomation View.

KPA Automation softPLC

PLC programming environment

KPA Automation softPLC is a programming environment for developing PLC for real-time operation systems such as Linux, Xenomai, INtime, Windows. Focused on IEC 61131-3, KPA Automation softPLC technology is designed for all automation solutions, from machinery, controllers and drives manufacturers to system integrators and machine builders. This technology is based on straton® PLC core and fulfils the 4 key requirements we apply to our products: Small, Smart, Simple and Speedy.

Benefits and key features

■ Supports 5 programming languages

KPA Automation softPLC supports ST, IL, FBD, SFC, LD languages according to the IEC 61131-3 standard and provides a program conversion option that allows to translate an application into the chosen programming language in a few clicks.

■ Flexible cross-platform solution

KPA Automation softPLC is independent of hardware and can be integrated either on small platforms or on industrial PC platforms with or without operating systems.

■ Advanced debugging and monitoring tools

KPA Automation softPLC has a collection of features for making step by step debugging and includes a wizard that builds a monitoring application for the project.

■ Integration with EtherCAT and Motion control

- KPA EtherCAT Master to control EtherCAT network
- KPA EtherCAT Studio configuration and diagnostic tool
- KPA Motion to control single axis for point to point (P2P) according to PLCopen part 1, including gantry, gearing and camming options or 2D/3D coordinated motion according to PLCopen part 4
- Motion Configurator to generate axes configuration files and CAM tables

■ Supports range of networks

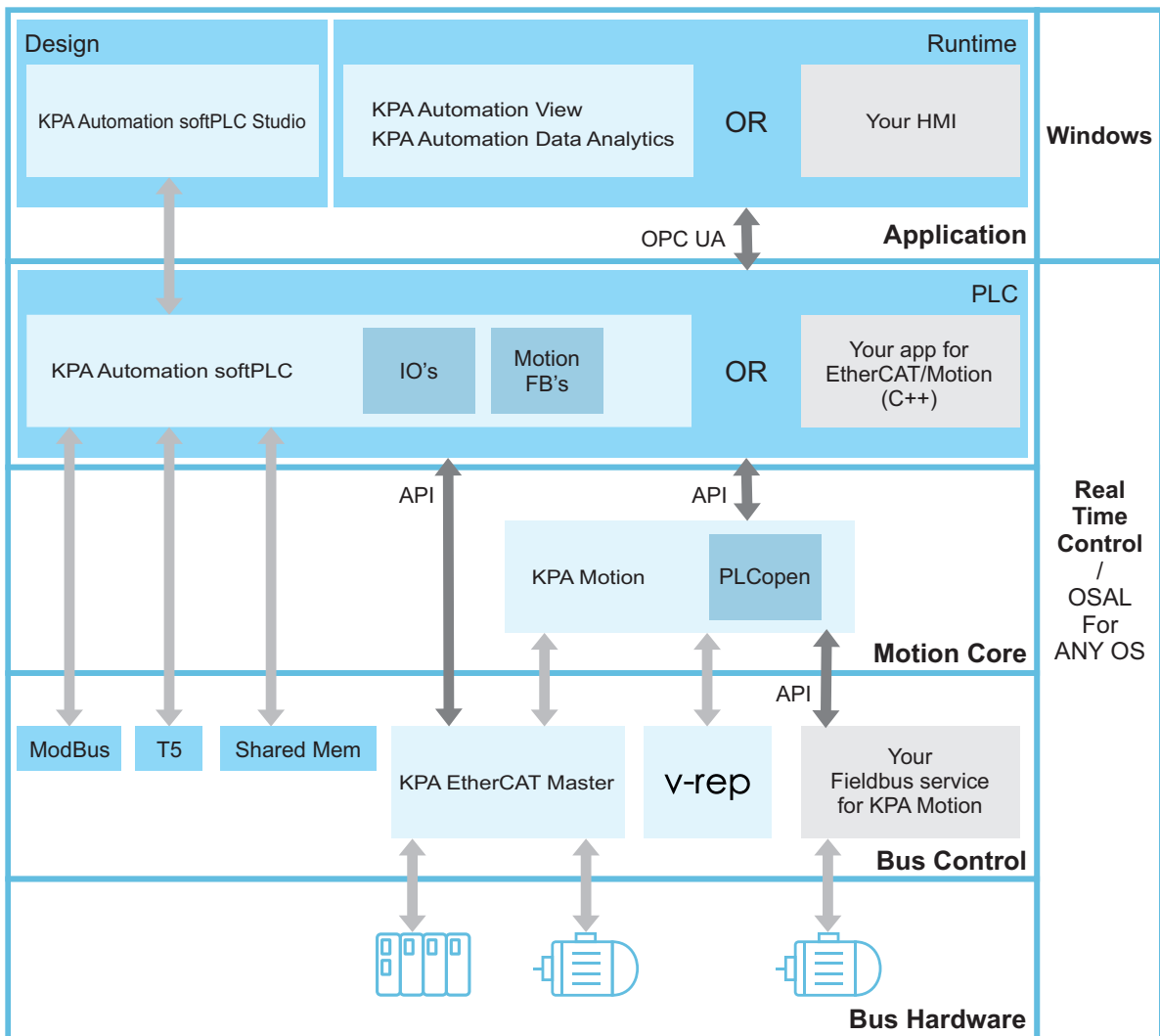
- OPC UA (server)
- MODBUS (both server and client)
- Shared Memory

■ Meets requirements of PLCopen

koenig-pa GmbH is a member of PLCopen – the leading association providing efficiency in industrial automation. PLCopen and its members concentrate on following standard technical specifications aimed to reduce costs in industrial engineering.

Workflow

KPA Automation softPLC is intuitive and powerful development environment. It combines all technology stacks necessary for efficient functionality of automation processes and offers a wide range of communication protocols.



KPA Automation Server

Data acquisition hub

KPA Automation Server collects data from various controllers, aggregates it and transfers through the secure OPC UA protocol. KPA Automation View may use KPA Automation Server for connection to any PLC through protocols other than OPC UA or OPC DA.

Benefits and key features

■ Unified controller gateway

KPA Automation Server integrates even old field devices and controllers into modern IT infrastructure.

■ Data provider for various types of applications

KPA Automation Server provides aggregated data for the following software:

- Software for creating Human Machine Interfaces (HMI), for example, KPA Automation View
- Data analytics applications, for example, KPA Automation Data Analytics
- Manufacturing Execution Systems (MES)

■ Secure data transfer

Data is transferred through the secure OPC UA protocol.

■ Flexible development solution

KPA Automation Server can be integrated or used as a standalone application.

■ Increasing capabilities by custom plug-in creation

Plug-ins can be created using a software development kit (SDK) to enhance communicating with specific devices.

■ Ready for Industry 4.0

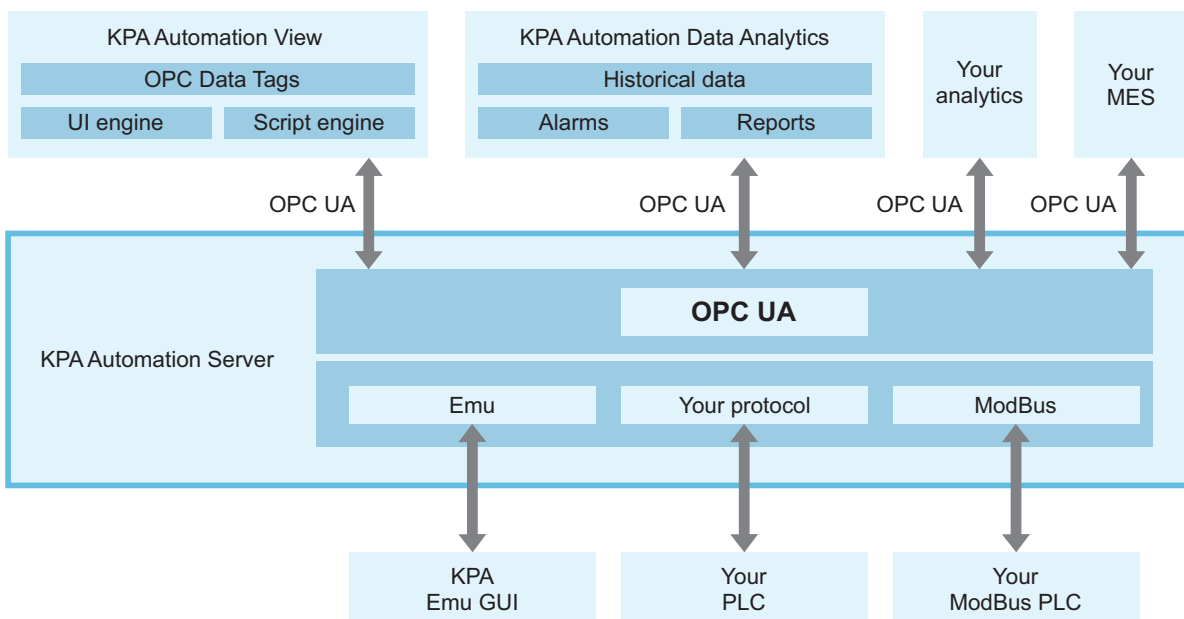
Industry 4.0 refers the concept of fully automated digital production and data exchange in manufacturing technologies and processes. Technology of secure data transfer between any types of devices, provided by KPA Automation Server, entirely complies with the Industry 4.0 concept.

Workflow

In KPAAutomation Server, development process runs separately from HMI and PLC.

The workflow is divided into a design mode and a runtime mode. The design mode is for creating and editing a configuration file. In the runtime mode the configuration file is used for building OPC UA tag tree and for connecting data sources (devices or applications), which use other access protocols, to OPC UA tag tree nodes.

Data tag tree can be either manually created in KPA Automation Server Configurator without participation of PLC or can be imported from the PLC into KPAAutomation Server. Imported data tag tree is protected from any changes in the PLC.



For HMI debugging and troubleshooting, KPAAutomation Server provides the Simulation plug-in, which generates data by source emulation to check tags values.

KPA Automation Data Analytics

Innovative reporting solution

KPA Automation Data Analytics is an innovative reporting solution, suitable for large and small companies, which need to collect a bunch of tag values in a table report.

Benefits and key features

■ Report customization

KPA Automation Data Analytics allows to specify data displayed in a table report and to add a company logo.

■ Unlimited number of reports

No limits on the number of created reports. A period for data selection can be set for each report.

■ Various report formats

Generated reports can be exported in HTML, PDF, Excel, and CSV file formats.

■ Scheduled report generation

In KPA Automation Data Analytics, it is possible to set specific time for automatic report generation.

■ User access control and logging

KPA Automation Analytics provides a wide range of user access settings. All user actions are logged.

■ Connection to various vendors PLC

Data is transferred between PLC and KPA Automation Data Analytics through the OPC UA protocol. Other protocols are supported using KPA Automation Server.

■ Suitable for CFR 21 Part 11 compliant systems

Title 21 Part 11 of the Code of Federal Regulations (CFR) establishes the United States Food and Drug Administration (FDA) regulations on electronic records and electronic signatures. CFR 21 Part 11 applies to medical device manufacturers, biotech companies, biologics developers, and other FDA-regulated industries.

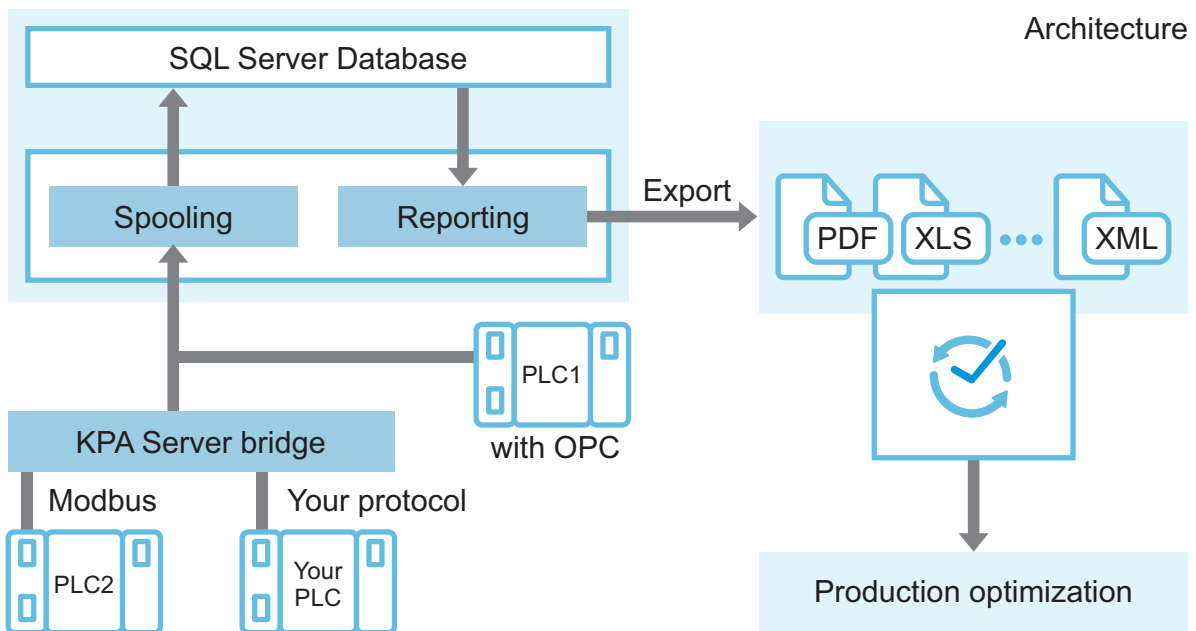
Workflow

KPAutomation DataAnalytics is provided as a standalone application.

Reports are generated using selected tags and special report templates, which can be customized.

Moreover, a delivered package includes the following software:

- KPAutomation View
- Spooling and report services running in background
- KPAutomation Server (optional) for transferring data through protocols other than OPC UA



KPA Automation View in the package is used to select tags to be collected, to configure reports and to view ready reports. There is no need to keep KPA Automation View running for data collection. All data is gathered by spooling service.

KPA Automation Control System

Hardware solutions

KPA Automation Control System is a compact system, equipped with energy-efficient CPUs and advanced SCADA software. This system is used for complex control tasks and is specially designed to save extra space and reduce the cost of maintenance.

Benefits and key features

■ High performance

KPA Automation Control System is equipped with Intel Core i5 CPUs for sophisticated control tasks.

■ Compact, cost-saving system

KPA Automation Control System is a compact single-block device thoroughly designed for saving space and reducing the cost of maintenance.

■ Windows 10 LTSB IoT pre-installed

KPA Automation Control System is a complex solution with pre-installed software and the operating system. Koenig-pa GmbH ensures full compatibility with Windows 10 LTSB IoT.

■ Native EtherCAT bus support

EtherCAT bus support is provided by a comprehensive own-developed master driver.

■ Connection to various PLC

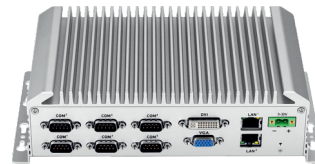
Data is transferred between PLC and KPA Automation Control System through OPC, Modbus TCP/IP, or custom TCP/IP protocols.

■ Advanced software package: HMI and PLC

A delivered package may include the following software:

- KPA Automation View – a powerful HMI solution with designer tools for programming appearance and behavior of each interface control. It provides access to unlimited tags through OPC UA, OPC DA Classic or custom TCP-based protocols.
- KPA Automation Straton NS – PLC programming environment that complies with the IEC 61131-3 standard.

Hardware specifications

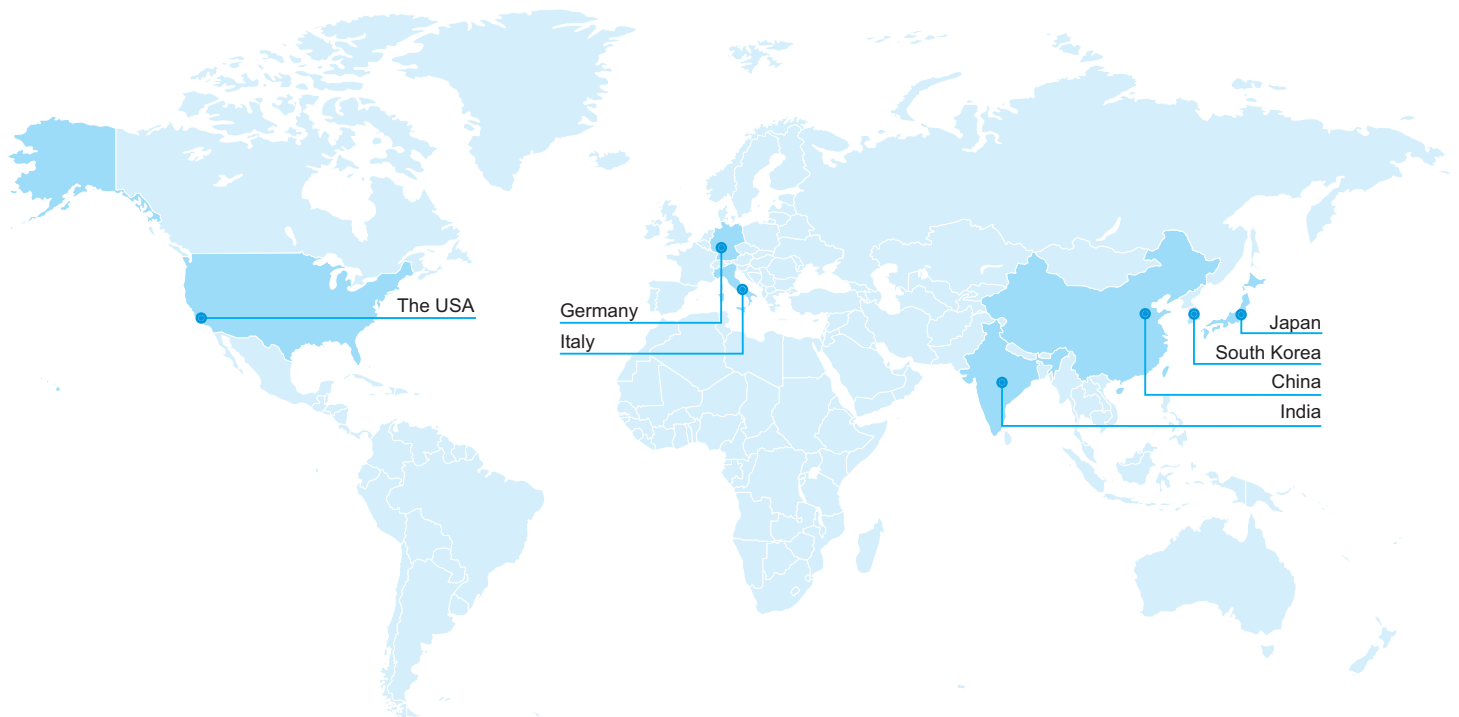


Model	KPA Automation Control System Panel	KPA Automation Control System Box
CPU	i3 / i5 / i7 / Celeron / Atom	i3 / i5 / i7 / Celeron / Atom
RAM	4 / 8 / 16 GB	4 / 8 / 16 GB
Display controller	Embedded, Intel® integrated	Embedded, Intel® integrated
Storage	64 Gb SSD or higher	64 Gb SSD or higher
Networking	Multiple Intel® I210/I211 Ethernet Controller	Multiple Intel® I210/I211 Ethernet Controller
Interfaces	Various VGA, DVI, HDMI, USB 2.0/3.0, RS-232/485 (depending on part number)	Various VGA, DVI, HDMI, USB 2.0/3.0, RS-232/485 (depending on part number)
Display	Integrated 12/15/15.6/17/19/21", max. resolutions 4K, 4:3/16:9, resistive or capacitive touch panel	Integrated 12/15/15.6/17/19/21", max. resolutions 4K, 4:3/16:9, resistive or capacitive touch panel
Power source	9...30V DC	9...30V DC
Case protection	IP20...IP65	IP20...IP65
Cooling	Active or fanless	Active or fanless
Regulatory	FCC, CE, RoHS standard	FCC, CE, RoHS standard
Working conditions	Temperature: -20...60 °C, Relative humidity 0...90%, non-condensing	Temperature: -20...60 °C, Relative humidity 0...90%, non-condensing



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