KPA Automation platform
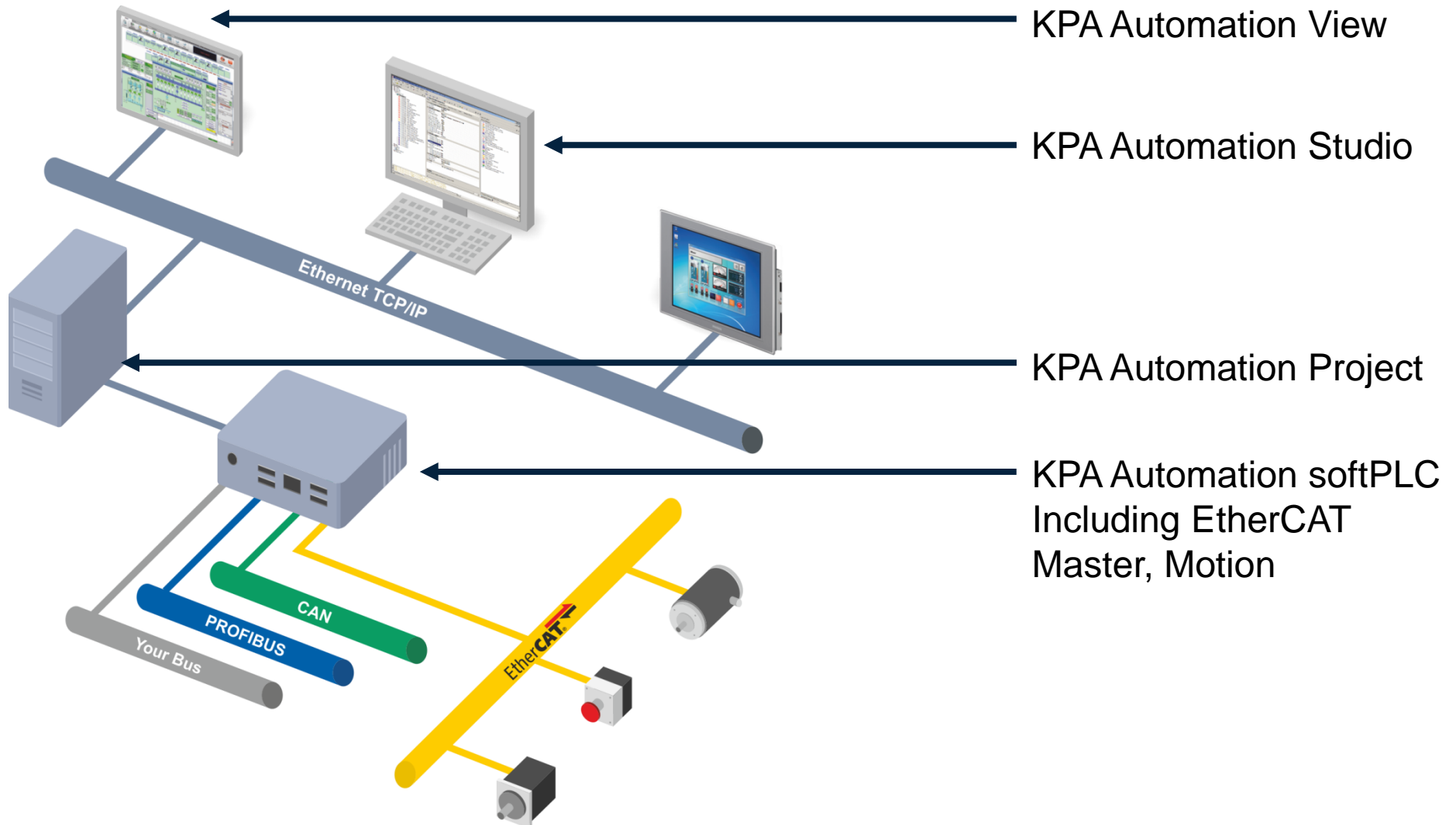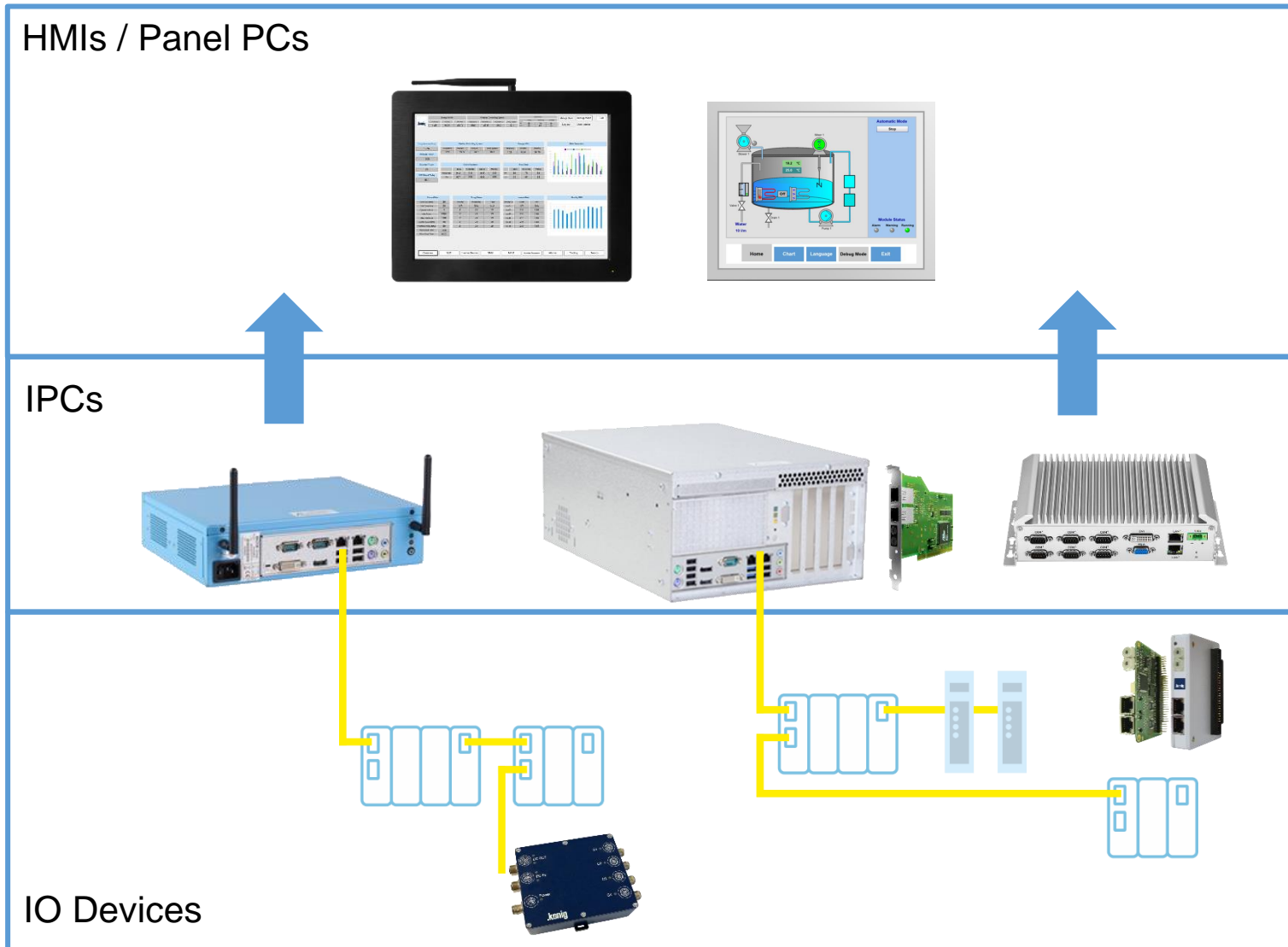
KPA Automation platform • software overview

KPA Automation View

KPA Automation Studio

KPA Automation Project

KPA Automation softPLC
Including EtherCAT
Master, Motion

KPA Automation platform • hardware overview

KPA Automation platform

KPA Automation softPLC

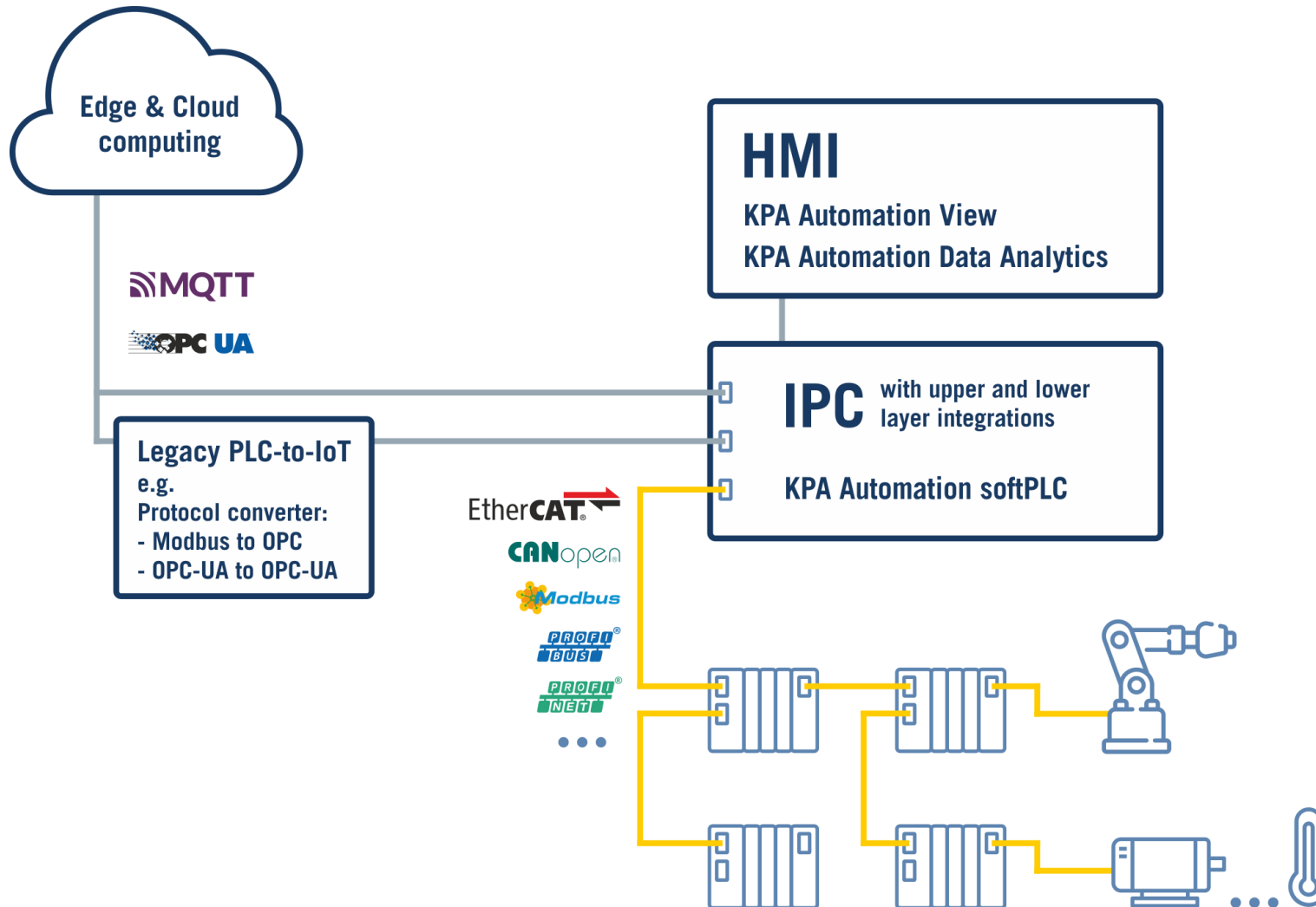# KPA Automation platform • softPLC
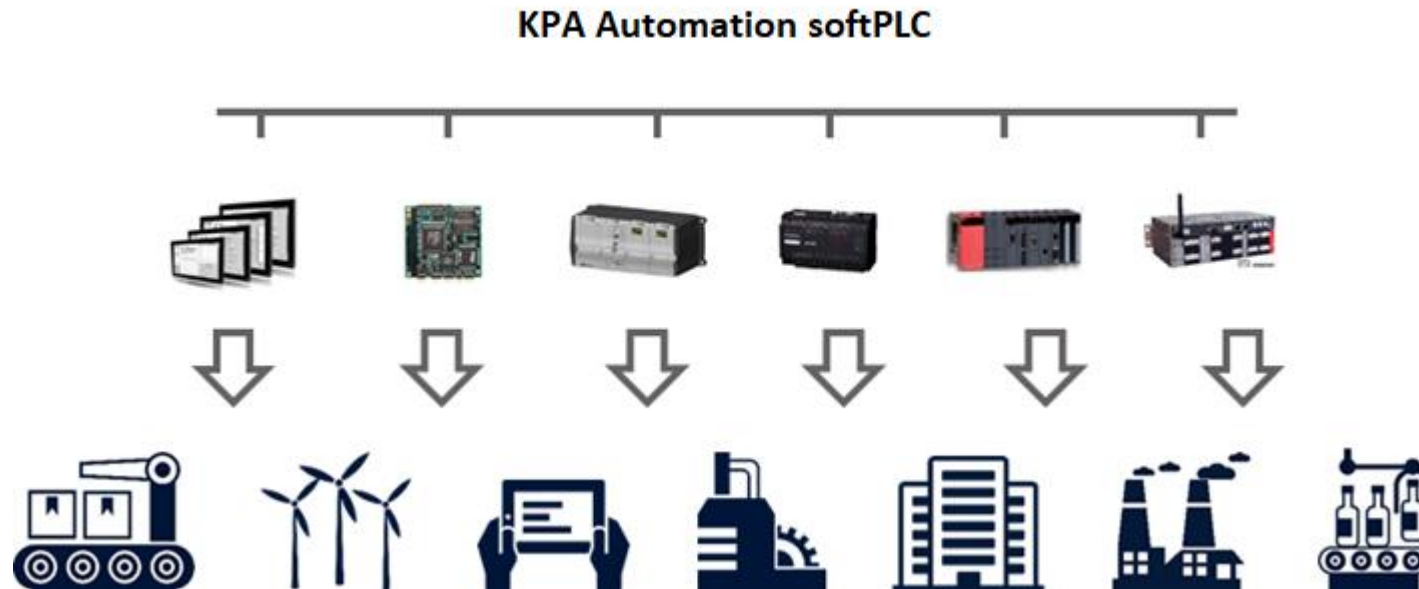
KPA Automation softPLC (based on Straton)

KPA is provider for complete Control System solutions based on
KPA Automation platform

- One source for Hardware and software (all preinstalled):
    - IPC, IO's
    - Operation systems
    - PLC Software and drivers

- Better support, better price

- Openness, better support

KPA Automation platform • softPLC • overview

KPA Automation platform • softPLC • all in one

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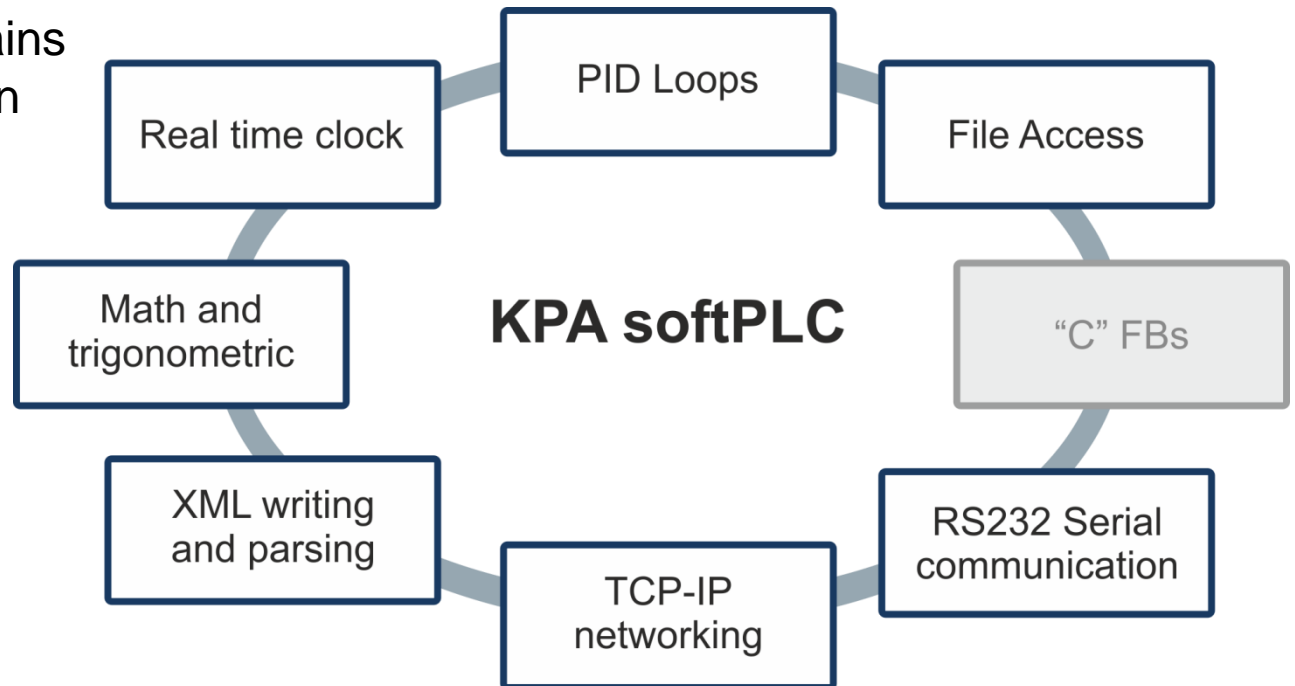

KPA Automation softPLC Runtime → make any device as PLC

- Any CPU: x86, x64, arm, FPGA, …
- Any OS: Windows, INtime, Linux, Xenomai, QNX…
- Any Fieldbus: EtherCAT, Modbus, OPC-UA, …
- Any I/O device

KPA Automation platform • softPLC • all in one

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KPA Automation softPLC Runtime

- Modular development environment based on IEC61131
- Operation System via tiny abstraction layer
- Build-in drivers, own drivers
- Build-in functions and function blocks, own functions
- Remote communications
- Graphical configuration of communications
- Expert in different protocols and service assistance
- JSON/MQTT data publishing
- Build-in editors for EtherCAT, Motion, OPC-UA, Modbus Master and other drivers
- Various set of PLC Tools

KPA Automation platform • softPLC • all in one

KPA Automation softPLC Runtime

- Extensive range of FBs with ability to add more
- Vast range of FBs, over and above IEC61131-3 standard:
  - TCP-IP functions
  - XML functions
  - File operations, Retains
  - Serial communication

KPA softPLC

- Real time clock
- PID Loops
- File Access
- Math and trigonometric
- "C" FBs
- XML writing and parsing
- TCP-IP networking
- RS232 Serial communication

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KPA Automation softPLC Editor & Runtime / IEC 61131-3

- FBD
- SFC
- LD
- ST
- IL

KPA Automation platform • softPLC • all in one

KPA Automation softPLC Studio & Runtime – debugging, commissioning and support

- Full Simulation
- Break points, Watch, Monitoring, Charts
- Program & variables locking
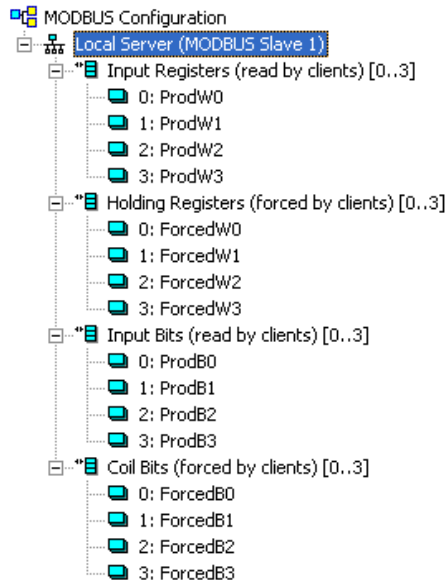- 3rd Party Tools for monitoring and debugging
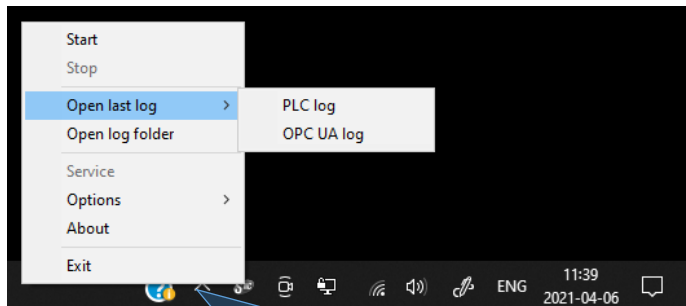
- Windows service
- Logs, & traces
- Options

KPA Automation platform • softPLC • all in one

KPA Automation softPLC Studio & Runtime –
Fieldbuses

- MODBUS Master/Slave
- CAN / CANOpen
- …

```
MODBUS Configuration
  Local Server (MODBUS Slave 1)
     Input Registers (read by clients) [0..3]
        0: ProdW0
        1: ProdW1
        2: ProdW2
        3: ProdW3
     Holding Registers (forced by clients) [0..3]
        0: ForcedW0
        1: ForcedW1
        2: ForcedW2
        3: ForcedW3
     Input Bits (read by clients) [0..3]
        0: ProdB0
        1: ProdB1
        2: ProdB2
        3: ProdB3
     Coil Bits (forced by clients) [0..3]
        0: ForcedB0
        1: ForcedB1
        2: ForcedB2
        3: ForcedB3
```

KPA Automation platform • softPLC • all in one

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KPA Automation softPLC Studio & Runtime – Fieldbuses

- EtherCAT

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KPA Automation softPLC & Runtime –
Fieldbuses

• OPC UA

KPA Automation platform

KPA Automation View

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KPA Automation Studio

- UI build with widgets
- Tags / connection to PLCs
- Regional and MUI
- Security
- …

Compile and debug
HMI project

KPA Automation View

Communication to PLC
via industry standards: Modbus, OPC UA, MQTT

KPA softPLC

KPA 3rd party PLC

Multiple languages

User access control

OPC DA client

User actions log

Multi-HMI support

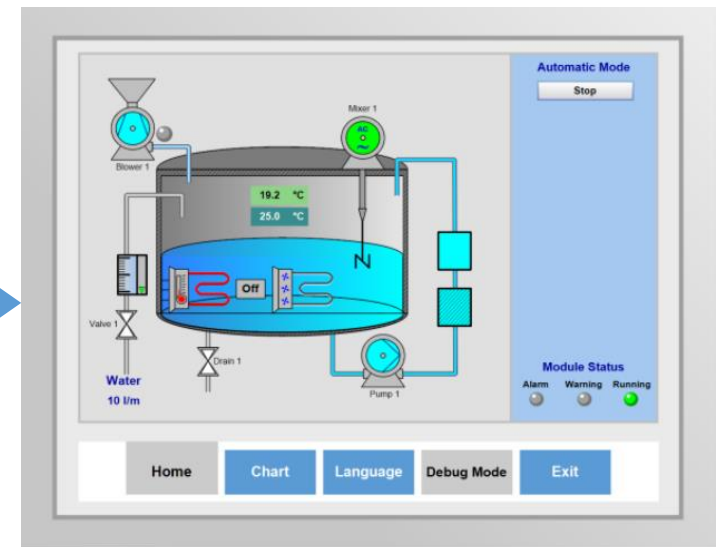# KPA Automation platform • view • design time

KPA Automation based solutions ensure the following possibilities:
- Hierarchical architecture with object-oriented design
- Hierarchical user access and permissions system
- Quality Control and Quality Assurance with reports, alarms and events
- Report system with relevant historical data acquisition, storing and retrieving
- Multilanguage support including major European and Asian languages
- Alarms & events, customizable reporting system
- Thin and thick clients support

KPA Automation Studio

- UI build with widgets
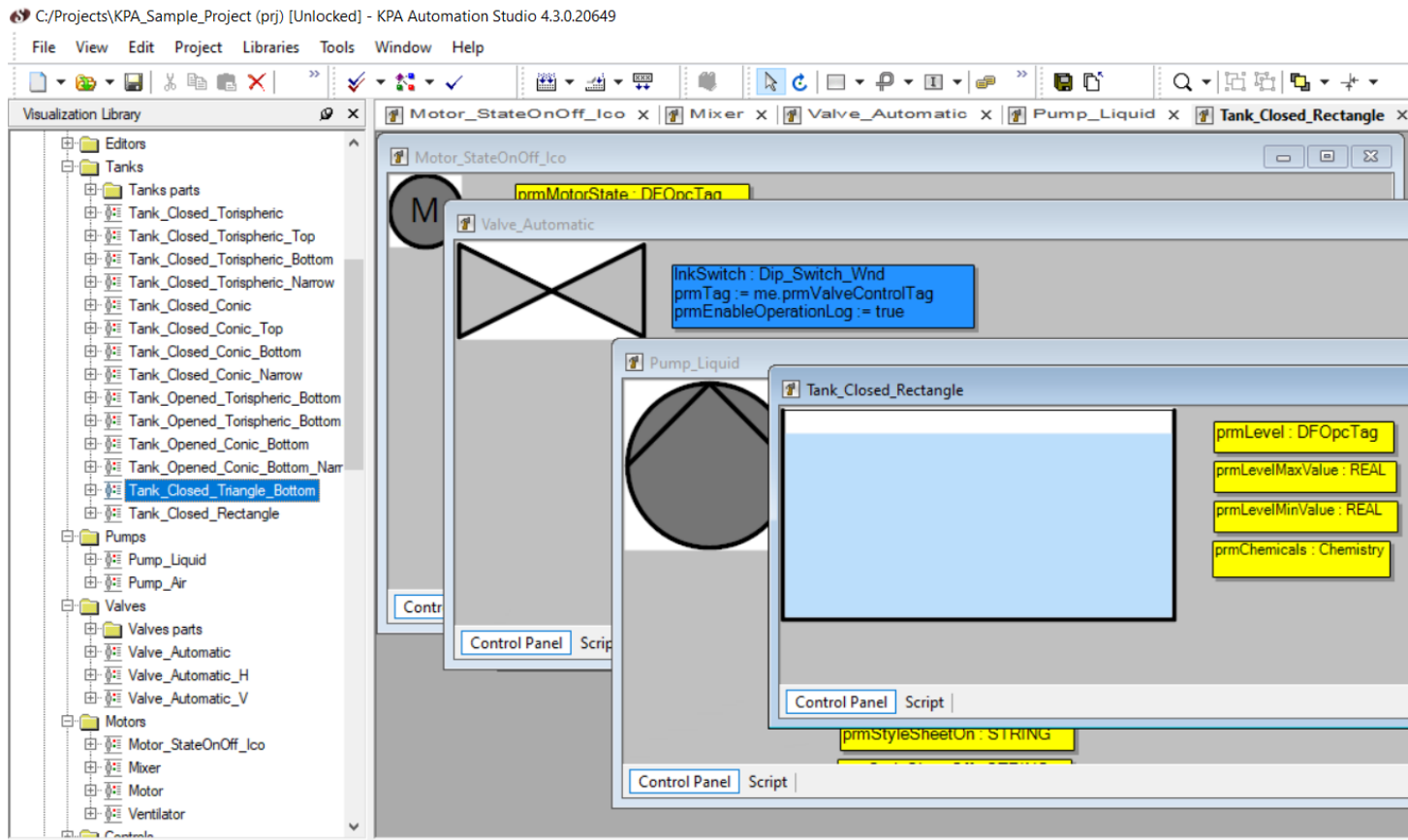- Tags / connection to PLCs
- Regional and MUI
- Security
- …

Compile and debug
HMI project

KPA Automation platform • view • design time

UI build with widgets:
- Basic primitives: Value input, Value indicator, circular, rectangles, …
- Extended Widgets: Tanks, Pumps, Valves, …

KPA Automation platform • view • design time

UI configuration:
- Screens
- Connections to tags

KPA Automation platform • view • design time

KPA Automation based solutions ensure the following possibilities:
- Data Analytics - Data storage, historical data acquisition and reporting system
- Alarms and events
- OPC DA/OPC UA, Modbus, and further via KPA Automation Server
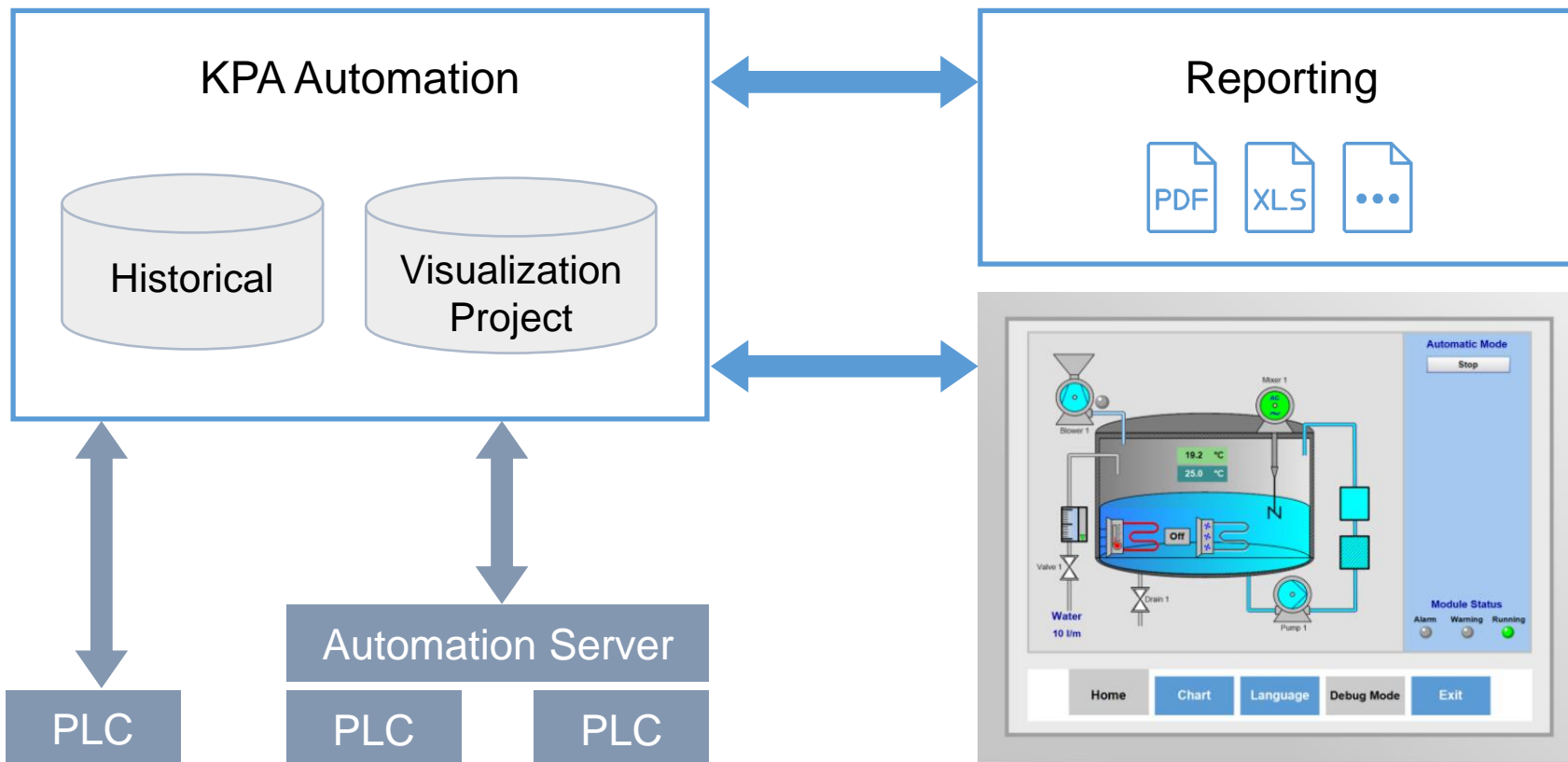
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Thank you for your attention