



atvise® hmi

Easily visualize complex things

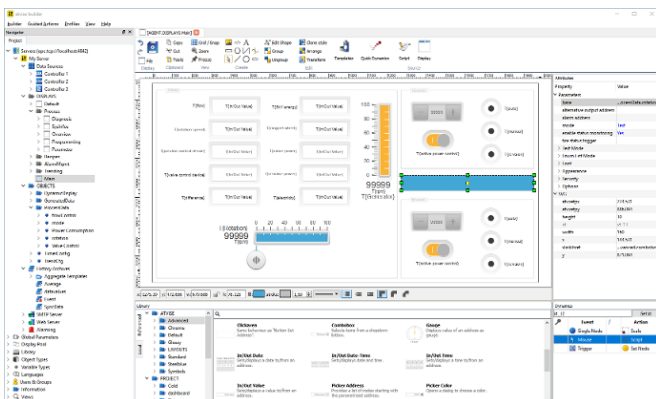
Achieving your goal quickly and efficiently

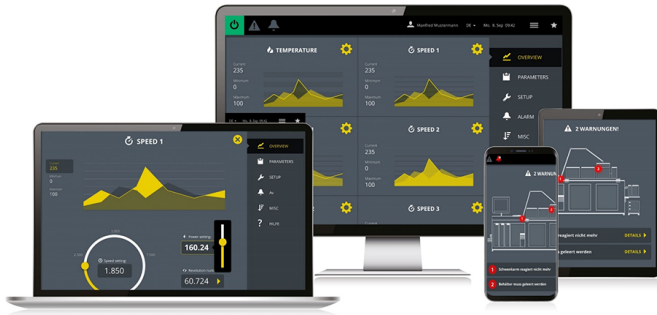
With the atvise® builder as an engineering tool with full graphic support, atvise® hmi offers everything needed for the rapid implementation of visualizations. In addition to an extensive object catalogue, drag and drop support and consistent object orientation, atvise® users also have a fully integrated responsive design framework at their disposal. Numerous prepared dynamizations, drag and drop support and high degrees of freedom in implementation enable both beginners and experts to use the atvise® hmi optimally. Development is possible on 3 levels:

- **For beginners:** Simple dynamization with preconfigured dynamizations are easily created.
- **For professionals:** Simple Dynamics allows for dynamizations to be implemented in a variety of ways via modular toolbox.
- **For experts:** Client- and server-side scripting with an integrated development environment as well as the possibility of expanding atvise® with external libraries and frameworks adding more functionality.

Versatile regarding data communication

In addition to direct connection via OPC UA Client, Siemens S7 300/400/1200/1500 as well as Rockwell Compact Logix controllers can be connected for data acquisition via the atvise® connect communication module. Additional generic interfaces are also offered, e.g. KNX, BACnet and MQTT. Due to the integrated onboard OPC UA server, atvise® hmi applications can be easily expanded at any time. The special feature here is that not only live data, but also alarms and historical data can be synchronised seamlessly across several levels via the OPC UA interface. For example, after successful implementation of the HMI, a higher-level atvise® scada application can be implemented downstream without having to invest in data interfaces and without interrupting operation of the HMI applications.





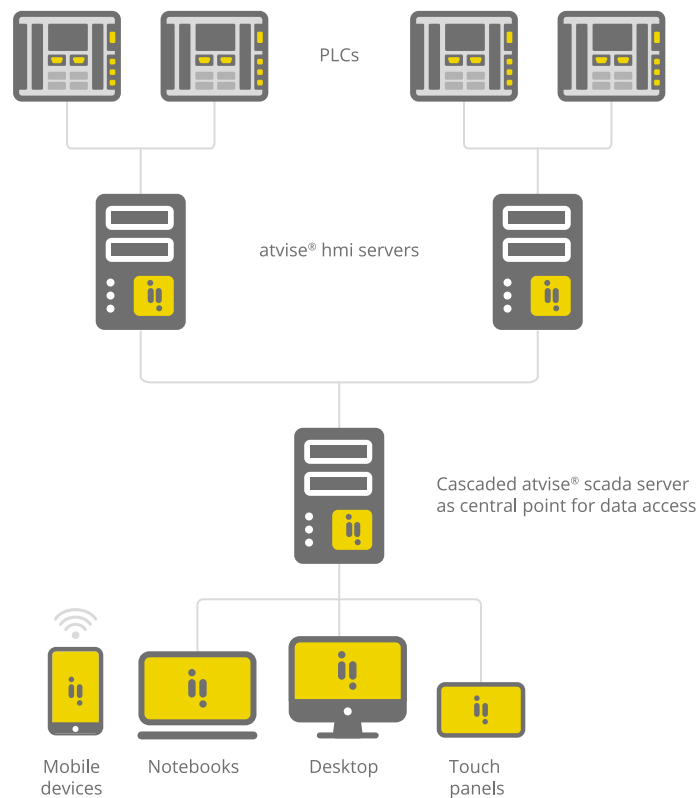
Open for any front end

During the implementation of HMIs, atvise® hmi offers a great deal of design freedom for implementation. The following options are available to our users for implementation:

- Pure drag and drop engineering on the basis of SVG
- Modification of our standard components and expansion of the object catalogue with HTML-based controls
- 100 % customised front end based on modern frameworks such as React, Angular or Vue

Consistent object orientation

atvise® hmi has been consistently built on the basis of OPC UA, which defines standardized, vertical and object-oriented working principles, among other things. The intelligent object/type concept reduces programming effort, is more structured, compact and thus offers better legibility than data organized in lists with conventional engineering practices. This not only results in shorter engineering cycles but ultimately in better applications that can be put into operation and maintained much more easily.



atvise® hmi

| Process connection | |
|-----------------------------------|---|
| Protocols | <ul style="list-style-type: none"> • OPC UA Data Access, OPC UA Historical Access Server and Client • OPC UA Alarms & Conditions Server & Client, OPC UA Methods Server & Client • OPC Data Access V2.05, V3.0, webMI Data Interface, SNMP V1.0, V2.0c • Siemens S7 Step7/TIA, Rockwell Compact/Control Logix, Modbus, BACnet, KNX, MQTT via atvise® connect • Databases via ODBC, web services via HTTP/HTTPS |
| Physical interface | Ethernet – physical characteristics depend on the target device |
| Parallel operation | Yes – multiple protocols, multiple data sources |
| Data types | All OPC UA compliant elementary types, fields and structures |
| Data mapping | Integrated – digital, analogue and character strings |
| Data model transfer | Yes – either manual or automatic |
| Data designation | Freely selectable – transfer from data source possible |
| Source timestamping | Yes – by controller, OPC compliant |
| Quality labelling | Yes – by controller, OPC compliant |
| Transmission modes | Depending on the protocol, event-driven or cyclic |
| Update rate | <ul style="list-style-type: none"> • Project and configuration-dependent from 100 ms • Adjustable, depending on protocol |
| Update suppression | Time and threshold-dependent |
| Connection monitoring | Yes |
| Access security/security | Yes – OPC UA compliant, optionally with SSL encryption |
| Data structure determination | Hierarchical browser interface for parameter assignment and runtime |
| Simulation mode | Yes |
| Logging | Yes |
| Server | |
| Core processes technology | C++ platform-neutral |
| Module interface | C++ API |
| Processing in multiple threads | Yes |
| Client-side interface | Integrated web server – either HTTP or HTTPS |
| Interface to higher-level systems | <ul style="list-style-type: none"> • OPC UA Data Access, OPC UA Alarms & Conditions, OPC UA Historical Access • OPC UA Methods, HTTP/HTTPS |
| Configuration persistence | <ul style="list-style-type: none"> • Given – configuration is stored in the implemented database |
| Process data model | <ul style="list-style-type: none"> • Optionally fully structured or object-oriented • Support of hierarchies and derived types |
| Server timestamp | Yes – independent of the source timestamp |
| Alarm system | OPC UA Alarms and Conditions compliant alarm processing |
| Historization | Process value database and alarm database with incremental data archiving |
| Aggregation | <ul style="list-style-type: none"> • OPC UA compliant • Support for derived archives and nested aggregation |
| Reporting | Yes – automated generation of PDFs |
| Scripting of runtime environment | <ul style="list-style-type: none"> • Yes – server-side JavaScript runtime environment • Full access to data point functions and database queries possible • Support for external function extensions via DLLs |
| User management | Yes – users, groups, rights; 2-factor authentication |

| Server | |
|---------------------------|--|
| Failure safety | Yes – by configuring a redundant partner server |
| Virtualization | Possible in standalone operation |
| Quantity structures | Project and hardware-dependent ¹⁾ |
| Client | |
| Client technology | Standards-compliant web browser ²⁾ |
| Process images technology | HTML, SVG, JavaScript |
| Number of clients | Project, hardware and license-dependent ¹⁾ |
| Continuous zooming | Yes |
| Automatic scaling | Yes |
| Multilingual | Yes |
| Character set | Any selectable |
| Process data display | Display of process data and structures possible |
| Trending | <ul style="list-style-type: none"> • Optional online configurable and/or offline trending possible • Support for multiple trends in one view |
| Alarm screen | Yes |
| History screen | Yes |
| Time planner | Yes |

¹⁾ Contact us for detailed information on quantity structures. An overview of possible project configurations and hardware setups can be accessed at ➔ www.atvise.com in the "System Requirements" area.

²⁾ Detailed information on supported operating systems and web browsers can be found at ➔ www.atvise.com and accessed in the "System Requirements" area. The information in this document applies to atvise® 3.10. In the product tests of atvise® 3.10, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.10.

| Configuration/engineering | |
|--------------------------------|--|
| Interface to the OPC UA server | Yes |
| Online engineering | Yes |
| Remote engineering | Yes |
| Multiuser engineering | Yes |
| Undockable views | Yes |
| Global parameters | Yes |
| Data point views | Yes |
| Graphics library | Yes (optional) |
| Import/Export | XML and CSV |
| Customisable user profiles | Yes |
| Help systems | Yes |
| Primitive graphic objects | Line, spline, rectangle, circle, ellipse, polygon, HTML elements, text fields |
| Adaptability of graphics | <ul style="list-style-type: none"> • Shape and size adjustment, roundings, colours and colour gradients • Transparency, semi-transparency, rotation, mirroring |
| Types of dynamisation | <ul style="list-style-type: none"> • Changing of text content, changing of colours, switching of visibility • Scaling, shifting, rotation, flashing |
| Global search | Yes |
| Automated engineering | Yes |
| Installation | |
| Clients | No installation necessary |
| Server | <ul style="list-style-type: none"> • Windows: Installation via executable • Linux: Installation via package |

| Installation | |
|-------------------------------------|---|
| Licensing | <ul style="list-style-type: none"> • Licensing based on CCDs (Concurrent Connected Data Points) • Number of all data points displayed simultaneously |
| Licence protection | Server-side verification through a hardware-dependent software key |
| Diagnostics | |
| Process data monitor | Yes |
| Process data statistics | Yes |
| Systemlog | Yes |
| System requirements for Server | |
| Device | <ul style="list-style-type: none"> • Generally project-dependent • Minimum scope: <ul style="list-style-type: none"> – x86 or ARM-based CPU with at least 1 core and 500 MHz clock speed – At least 500 MB RAM – At least 128 MB free space – At least one network card |
| Operating system ¹⁾ | <ul style="list-style-type: none"> • Windows 10 (32 bit and 64 bit) • Windows 11 (64 bit) • Windows Server 2019/2022 (64 bit) • Ubuntu 20.04/22.04 LTS (64 bit) • Debian 11 (64 bit) • Debian 11 (32 bit, ARMv6 command set) |
| System requirements for engineering | |
| Device | <ul style="list-style-type: none"> • Generally project-dependent • Minimum scope: <ul style="list-style-type: none"> – x86-based CPU with at least 2 cores and 1.0 GHz clock speed – At least 2 GB RAM – At least 512 MB free space – Graphic resolution at least 1280 x 1024 pixels |
| Operating system ¹⁾ | <ul style="list-style-type: none"> • Windows 10 (32 bit and 64 bit) • Windows 11 (64 bit) • Windows Server 2019/2022 (64 bit) |
| Container virtualisation | Yes, according to guidelines on ➔ www.atvise.com |
| Operating Elements | <ul style="list-style-type: none"> • Keyboard • 2-button mouse |
| System requirements for client | |
| Device | <ul style="list-style-type: none"> • Generally project-dependent • Minimum scope: <ul style="list-style-type: none"> – See minimum requirements of the web browser used – If client and server are operated on the same hardware, the minimum requirements for both need to be added. – At least one network card – Graphic resolution at least 800 x 480 pixels |

¹⁾ Detailed information on supported operating systems and web browsers can be found at ➔ www.atvise.com and accessed in the "System Requirements" area. The information in this document applies to atvise® 3.10. In the product tests of atvise® 3.10, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.10.

| System requirements for client | |
|--------------------------------|--|
| Operating system ¹⁾ | Freely selectable |
| Web browser ¹⁾ | <ul style="list-style-type: none">• Chrome• Chromium• Firefox ESR• Firefox• Microsoft Edge• Safari Mobile |
| Operating elements | <ul style="list-style-type: none">• Keyboard• 2-button mouse• Touch screen |

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