



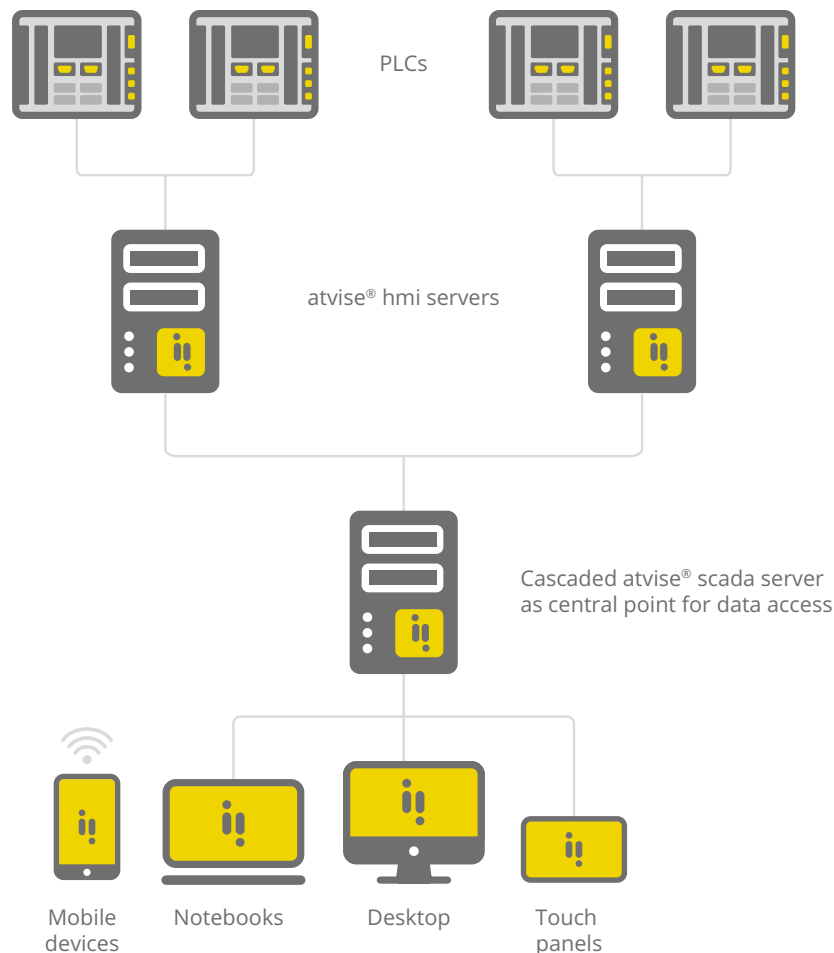
atvise® hmi

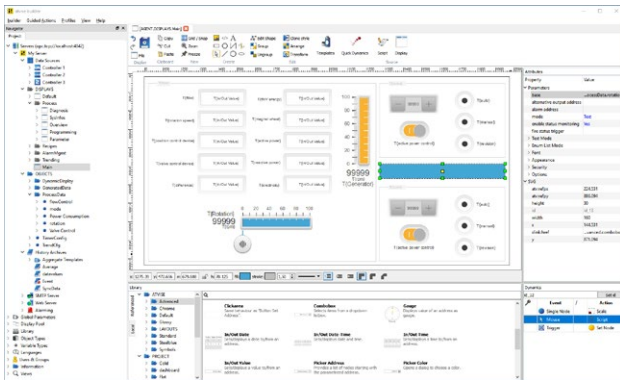
Easily visualize complex things

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 & drop support and consistent object orientation, atvise® hmi users also have a fully integrated responsive-design framework at their disposal. Numerous prepared dynamizations, drag-&-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:** easy dynamization with preconfigured dynamizations
- **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-&-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 Com-pact/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
Refresh rate	<ul style="list-style-type: none"> • Project and configuration-dependent from 100 ms • Adjustable, depending on protocol
Refresh 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
Historisation	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
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 administration	Yes – Users, groups, rights
Fail-safe	Yes – By configuring a redundant partner server
Virtualisation	Possible in standalone operation
Quantity structures	Project and hardware-dependent ¹⁾

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.

atvise® hmi	
Client	
Client technology	Standards-compliant web browser ¹⁾
Process images technology	HTML, SVG, JavaScript
Number of clients	Project, hardware and license-dependent ²⁾
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) 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 atvise® 3.5. In the product tests of atvise® 3.5, Windows 10 and Ubuntu 18.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.5.

2) 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.

atvise® hmi	
Configuration / Engineering	
Interface to the server OPC UA	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
Licencing	<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

atvise® hmi	
Diagnostics	
Process data monitor	Yes
Process data statistics	Yes
System log	Yes
System requirements for server	
Device	<ul style="list-style-type: none"> • Generally project-dependent • Minimum: 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 Server 2012/2016/2019 (64-bit) • Ubuntu 16.04/18.04 LTS (32-bit and 64-bit) • Debian 9.5/10 (32-bit, ARMv6 command set)
System requirements for engineering	
Device	<ul style="list-style-type: none"> • Generally project-dependent • Minimum: 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 1280x1024 pixels
Operating system ¹⁾	<ul style="list-style-type: none"> • Windows 10 (32-bit and 64-bit) • Windows Server 2012/2016/2019 (64-bit)
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: 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 800x480 pixels
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 • Touchscreen

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