



## atvise® hmi

### Easily visualize complex things

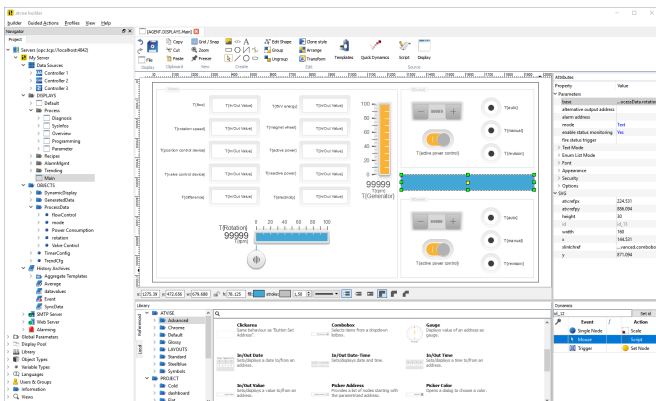
#### Achieving your goal quickly and efficiently

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 responsiveness 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. The OPC UA interface also allows access to the peripherals using connection and user certificates. 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.





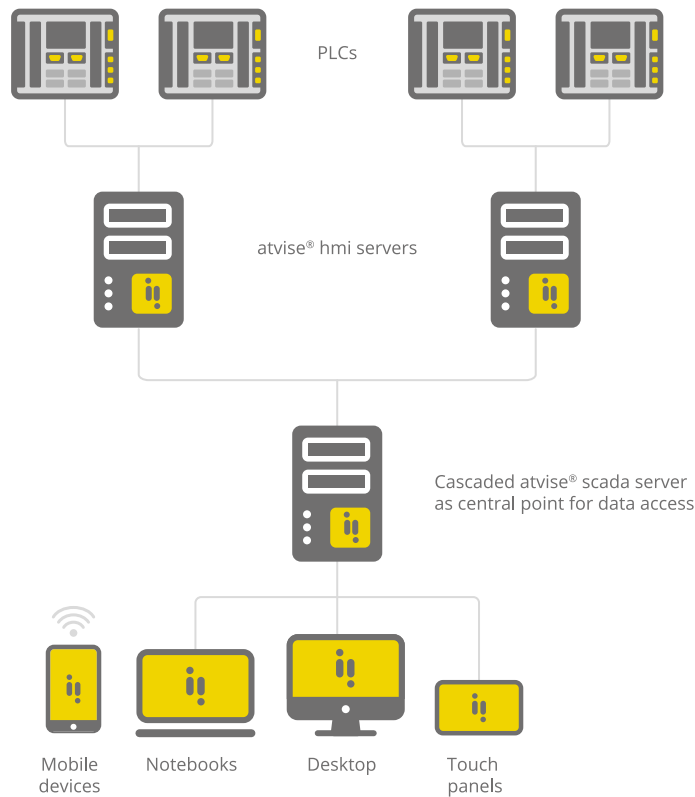
**Open for any front end**

During the implementation of HMIs, atvise® hmi offers a great deal of design freedom for implementation. The following options are available to 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 % customized 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"> <li>OPC UA Data Access, OPC UA Historical Access Server and Client</li> <li>OPC UA Alarms &amp; Conditions Server &amp; Client, OPC UA Methods Server &amp; Client</li> <li>OPC Data Access V2.05, V3.0, webMI Data Interface, SNMP V1.0, V2.0c</li> <li>Siemens S7 Step7/TIA, Rockwell Compact/Control Logix, Modbus, BACnet, KNX, MQTT via atvise® connect</li> <li>Databases via ODBC, web services via HTTP/HTTPS</li> </ul>
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"> <li>Project and configuration-dependent from 100 ms</li> <li>Adjustable, depending on protocol</li> </ul>
Update suppression	Time and threshold-dependent
Connection monitoring	Yes
Access security/security	Yes – OPC UA compliant, optionally with SSL encryption, onboard certificate management
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"> <li>OPC UA Data Access, OPC UA Alarms &amp; Conditions, OPC UA Historical Access</li> <li>OPC UA Methods, HTTP/HTTPS</li> </ul>
Configuration persistence	<ul style="list-style-type: none"> <li>Given – configuration is stored in the implemented database</li> </ul>
Process data model	<ul style="list-style-type: none"> <li>Optionally fully structured or object-oriented</li> <li>Support of hierarchies and derived types</li> </ul>
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, fine-grained event archives for OPC UA Alarms and Events
Aggregation	<ul style="list-style-type: none"> <li>OPC UA compliant</li> <li>Support for derived archives and nested aggregation</li> </ul>
Reporting	Yes – automated generation of PDFs, automatic email dispatch possible
Scripting of runtime environment	<ul style="list-style-type: none"> <li>Yes – server-side JavaScript runtime environment</li> <li>Full access to data point functions and database queries possible</li> <li>Support for external function extensions via DLLs</li> </ul>
User management	Yes – users, groups, rights; 2-factor authentication
Failure safety	Yes – by configuring a redundant partner server

Server	
Virtualization	Possible in standalone operation
Quantity structures	Project and hardware-dependent <sup>1)</sup>

<sup>1)</sup> Contact us for detailed information on quantity structures. An overview of possible project configurations and hardware setups can be accessed at [www.atvise.com](http://www.atvise.com) in the "System Requirements" area.

Client	
Client technology	Standards-compliant web browser <sup>2)</sup>
Process images technology	HTML, SVG, JavaScript
Number of clients	Project, hardware and license-dependent <sup>1)</sup>
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"> <li>• Optional online configurable and/or offline trending possible</li> <li>• Support for multiple trends in one view</li> </ul>
Alarm screen	Yes
History screen	Yes
Time planner	Yes

<sup>1)</sup> Contact us for detailed information on quantity structures. An overview of possible project configurations and hardware setups can be accessed at [www.atvise.com](http://www.atvise.com) in the "System Requirements" area.

<sup>2)</sup> Detailed information on supported operating systems and web browsers can be found at [www.atvise.com](http://www.atvise.com) and accessed in the "System Requirements" area. The information in this document applies atvise® 3.11. In the product tests of atvise® 3.11, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.11.

Configuration/engineering	
Interface to the 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"> <li>• Shape and size adjustment, roundings, colors and color gradients</li> <li>• Transparency, semi-transparency, rotation, mirroring</li> </ul>
Types of dynamization	<ul style="list-style-type: none"> <li>• Changing of text content, changing of colors, switching of visibility</li> <li>• Scaling, shifting, rotation, flashing</li> </ul>
Global search	Yes
Automated engineering	Yes

Installation	
Clients	No installation necessary
Server	<ul style="list-style-type: none"> <li>• Windows: Installation via executable</li> <li>• Linux: Installation via package</li> </ul>

Installation	
Licensing	<ul style="list-style-type: none"> <li>• Licensing based on CCDs (Concurrent Connected Data Points)</li> <li>• Number of all data points displayed simultaneously</li> </ul>
License 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"> <li>• Generally project-dependent</li> <li>• Minimum scope: <ul style="list-style-type: none"> <li>– x86 or ARM-based CPU with at least 1 core and 500 MHz pulsing</li> <li>– At least 500 MB RAM</li> <li>– At least 128 MB free memory</li> <li>– At least one network card</li> </ul> </li> </ul>
Operating system <sup>1)</sup>	<ul style="list-style-type: none"> <li>• Windows 10 (32 bit and 64 bit)</li> <li>• Windows 11 (64 bit)</li> <li>• Windows Server 2019/2022 (64 bit)</li> <li>• Ubuntu 20.04/22.04 LTS (64 bit)</li> <li>• Debian 11 (64 bit)</li> <li>• Debian 11 (32 bit, ARMv6 instruction set)</li> </ul>
<sup>1)</sup> Detailed information on supported operating systems and web browsers can be found at <a href="http://www.atvise.com">www.atvise.com</a> and accessed in the "System Requirements" area. The information in this document applies atvise® 3.11. In the product tests of atvise® 3.11, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.11.	
System requirements for engineering	
Device	<ul style="list-style-type: none"> <li>• Generally project-dependent</li> <li>• Minimum scope: <ul style="list-style-type: none"> <li>– x86-based CPU with at least 2 cores and 1.0 GHz pulsing</li> <li>– At least 2 GB RAM</li> <li>– At least 512 MB free memory</li> <li>– Graphic resolution at least 1280 x 1024 pixels</li> </ul> </li> </ul>
Operating system <sup>1)</sup>	<ul style="list-style-type: none"> <li>• Windows 10 (32 bit and 64 bit)</li> <li>• Windows 11 (64 bit)</li> <li>• Windows Server 2019/2022 (64 bit)</li> </ul>
Container virtualisation	Yes, according to guidelines on <a href="http://www.atvise.com">www.atvise.com</a>
Operating elements	<ul style="list-style-type: none"> <li>• Keyboard</li> <li>• 2-button mouse</li> </ul>
<sup>1)</sup> Detailed information on supported operating systems and web browsers can be found at <a href="http://www.atvise.com">www.atvise.com</a> and accessed in the "System Requirements" area. The information in this document applies atvise® 3.11. In the product tests of atvise® 3.11, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.11.	
System requirements for client	
Device	<ul style="list-style-type: none"> <li>• Generally project-dependent</li> <li>• Minimum scope: <ul style="list-style-type: none"> <li>– See minimum requirements of the web browser used</li> <li>– If client and server are operated on the same hardware, the minimum requirements for both need to be added.</li> <li>– At least one network card</li> <li>– Graphic resolution at least 800 × 480 pixels</li> </ul> </li> </ul>
Operating system <sup>1)</sup>	Freely selectable

**System requirements for client**

Web browser <sup>1)</sup>	<ul style="list-style-type: none"><li>● Chrome</li><li>● Chromium</li><li>● Firefox ESR</li><li>● Firefox</li><li>● Microsoft Edge</li><li>● Safari Mobile</li></ul>
Operating elements	<ul style="list-style-type: none"><li>● Keyboard</li><li>● 2-button mouse</li><li>● Touch screen</li></ul>

<sup>1)</sup> Detailed information on supported operating systems and web browsers can be found at [www.atvise.com](https://www.atvise.com) and accessed in the "System Requirements" area. The information in this document applies atvise® 3.11. In the product tests of atvise® 3.11, Windows 10 and Ubuntu 22.04 LTS are tested to their full extent. These platforms are recommended for running atvise® 3.11.