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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.



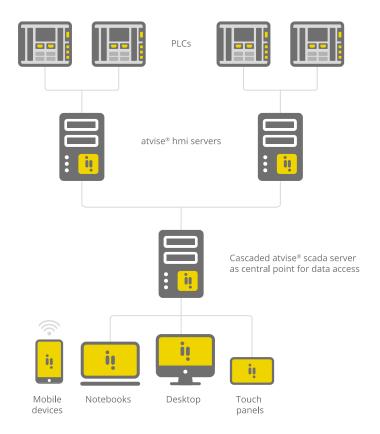
Open for any front end

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:

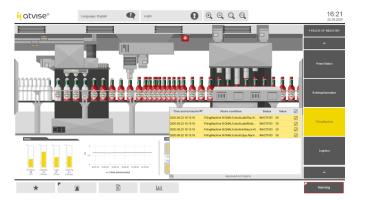
- Pure drag and drop engineering on the basis of SVG
- Modification of our standard components and expansion of the object catalogue with HTML-based controls
- 100 % customised front end based on modern frameworks such as React, Angular or Vue

Consistent object orientation

atvise[®] hmi has been consistently built on the basis of OPC UA, which defines standardized, vertical and objectoriented 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.



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atvise® hmi

Process connection	
Protocols	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	 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
	Yes
Logging	165
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	 OPC UA Data Access, OPC UA Alarms & Conditions, OPC UA Historical Access
	OPC UA Methods, HTTP/HTTPS
Configuration persistence	Given – configuration is stored in the implemented database
Process data model	 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	OPC UA compliantSupport for derived archives and nested aggregation
Reporting	Yes – automated generation of PDFs
Scripting of runtime environment	Yes – server-side JavaScript runtime environment
	 Full access to data point functions and database queries possible Support for external function extensions via DLLs
Liser management	Yes – users, groups, rights; 2-factor authentication
User management	וכא - עאבוא, אוטעאא, אאווגא, ביומנוטו מענוופוונונמנוטוו

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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	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 \Rightarrow www.atvise.com in the "System Requirements" area.

²⁾ Detailed information on supported operating systems and web browsers can be found at \rightarrow 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/engineeri	Ig .

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	 Shape and size adjustment, roundings, colours and colour gradients
	 Transparency, semi-transparency, rotation, mirroring
Types of dynamisation	 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	Windows: Installation via executable
	Linux: Installation via package

Installation	
Licensing	 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	Generally project-dependent
	Minimum scope:
	 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⁾	 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 engineeri	ng
Device	Generally project-dependent
	Minimum scope:
	 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⁾	 Windows 10 (32 bit and 64 bit)
	• Windows 11 (64 bit)
	Windows Server 2019/2022 (64 bit)
Container virtualisation	Yes, according to guidelines on <i>→ www.atvise.com</i>
Operating Elements	Keyboard
	2-button mouse

¹⁾ Detailed information on supported operating systems and web browsers can be found at rowww.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	
Device	Generally project-dependent
	Minimum scope:
	 See minimum requirements of the web browser used
	 If client and server are operated on the same hardware, the min- imum requirements for both need to be added.
	 At least one network card
	 Graphic resolution at least 800 x 480 pixels

System requirements for client	
Operating system ¹⁾	Freely selectable
Web browser ¹⁾	Chrome
	Chromium
	Firefox ESR
	Firefox
	Microsoft Edge
	Safari Mobile
Operating elements	Keyboard
	2-button mouse
	Touch screen

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.