

evon XAMControl evolution 3



Technical product description

XAMControl

XAMControl covers the area from visualization to the field, including PLC on freely selectable (standard) controllers. The system acts as a redundant host for large, failsafe systems and offers high performance, PLC programming in IEC-61131-3 and/or high level languages and automatic networking of the PLCs. It is the ideal basis for fast and efficient engineering.

Areas of application

XAMControl was conceived for large projects and the majority of applications is in such areas. Above all, XAMControl is successfully used in the following areas:

- Industry
- Production control system
- Tunnel and traffic infrastructure
- Building automation
- Energy data management

Highlights

- Complete support of **object-orientation** for efficient and standardized engineering
- Wide-ranging **library** available for a range of applications online via the "ACC store" (with over 4,000 automation objects)
- **Distributed automation solutions** from the field level to the management level.
- Horizontally and vertically freely scalable with many substations (PLCs) and operating stations
- Scalable from single user system to complex, high availability solutions
- Hardware independent automation solutions
- Open system design (high degree of extendibility)
- Automatic networking of all PLCs



HMI / Visualisierung

- 2D and 3D vector graphics with animation
- Open standard for graphical description (XAML)
- Multi-touch
- Extendible via high-level language (C#)
- Integration of custom or third-party libraries
- Free zooming, panning, de-cluttering and scaling
- Multi-monitor operation
- Multiple selection
- DirectX support
- Screen resolution independent
- Theme support
- Support of all popular graphic formats (jpg, png,...)

Multi-language

- Switchable online
- Multi-byte character sets (Chinese and Cyrillic character sets)
- Automatic translation with "Google Translate"
- Excel export and import

Drivers and Interfaces

- Several different drivers at the same time
- Uniform configuration and monitoring
- Outsourcing of drivers to other computers to distribute computing load
- Drivers available on all levels (PLC, SCADA)
- Bacnet, KNX, IEC60870-5-104 Client and Server, MBus, OPC 2.0, OPC UA Client and Server, Praesideo, SIMATIC S7 TCP/IP Link, SNMP, Watts, XMLMoris, MQTT
- Universal network service for connecting serial devices and various TCP protocols
- Field level: Profibus DP, Modbus RTU, Beckhoff ADS, M-Bus ...
- Open API interface

Alarm Management

- Freely definable alarm groups with up to 32,767 different priorities and freely selectable attributes (alarm colour incl. flashing, acknowledgement behaviour, icons ...)
- Collective alarm functions for picture groups, objects and visualization screens
- Alarm screen with definable column selection and extendible sort and filter options
- Direct redirection to process screen with the alarmed object via a click
- Comments and alarm notes (also mandatory)
- Configurable during operation
- Configurable alarms via alarm group via text message and/or mail incl. escalation mechanism
- Automatic optical highlighting of alarmed objects in the visualization
- Clear text speech output, allocation of audio files, etc.
- Pareto evaluation of alarm frequency and alarm duration
- Journal for historical evaluation
- Hiding alarms of definable system parts on different operating stations

User Management

- Complete access security with optional integration in Windows Active Directory
- Several levels of access rights
- Automatic, complete documentation of user interactions
- FDA 21 CFR Part 11 conform
- Up to 1024 user groups and an unlimited number of users
- Strong password, password expiry times, auto-logout, etc.
- User administration is applicable to all functionality (alarms, operation, reporting, configuration, etc.)
- Image authorizations (user rights, client-dependent authorizations, etc.)

Helpdesk/Maintenance Management

- Maintenance support
- Ticketing
- Commissioning support
- Allocation of responsibilities (and if requested, automatic notification via text message and/or mail)
- Step-by-step operation guidance during an event (incl. checklists, documents, ...)
- Direct representation with the objects in the visualization
- Transfer of information at shift change
- Definable groups (description, icon, notification behaviour, ...)
- Simple creation of new entries via drag&drop of an object
- Complete documentation in the database
- Pre-populated reports

Reporting

- Web reports using Microsoft Reporting Services (SSRS)
- Integrated report editor for SSRS (bars, tables, pie charts, pivot tables, ...)
- Excel reports
- Built-in alarm journal, Pareto analysis, operator interventions up to reports directly on the object with a wide range of filter possibilities
- Open database model and pre-installed views and functions
- Automatic report generation and sending via mail
- FDA 21 CFR Part 11 conform
- Excel, CSV, PDF export

Trending & Archiving

- All data are stored in a central database (master data, data model, process data, production data, etc.)
- FDA 21 CFR Part 11 conform
- Threshold value, cyclical, time-synchronous and event-triggered data recording
- Real-time data acquisition and buffering in the PLC
- Configurable data recording (incl. Excel for mass data)
- Simple quick-export in Excel, CSV, PDF
- Representation in current (live trend) and historical values
- Definable scaling, time offset of traces, automatic scaling
- Ruler function
- Multiple and mutual axis representation
- Add different objects to the trend display via simple drag&drop
- Creation of proprietary trend views
- Free zooming
- Display of alarms in the trend view
- View context-related trend evaluations directly with the objects in the visualization

Recommended Components

empfohlene Komponenten:

- B&R X20-Serie
- Beckhoff K-Bus
- Beckhoff EK9000
- Siemens ET200s
- Siemens ET200m
- Siemens ET200sp
- Wago IO System 750

Integrated Development Environment (IDE)

- Central programming and configuration of the entire automation landscape
- Shifting of programs to controllers using drag&drop
- Object-oriented programming of the automation landscape (visualization and control)
- PLC programming in IEC-61131-3 and/or in the high-level language C#
- Programming of the visualization via graphical editor and extension via high-level C#
- Simple backup/restore
- Generation of programs, visualization, I/O and driver configuration via solution generator (Excel import)

- Excel integration for simpler editing of mass data
- Offline simulation capability
- Online data monitoring
- Seamless integration of the ACC store (libraries available globally)

Web Visualization

- generic Web Visualization on Computer, Tablet and Smartphone
- modern Technologies: HTML5, Angular
- secure remote access

Production Management MES

- Material management
- Batch administration
- Product (production regulations, recipes, step chains)
- Production planning
- Track & Trace
- ISA S88 / S95 conform

Systemanforderungen

Solution Server

	MINIMAL	RECOMMENDED
Operating System	Windows 10 Professional – 64 Bit	Windows Server 2019 – 64 Bit Windows Server 2022 – 64 Bit
CPU	4 x 1,5 GHz	8 x 3 GHz
RAM	16 GB	32 GB
free Disk Space	60 GB	120 GB Enterprise SATA SSD or Enterprise M.2 SSD (*)
SQL Server	MS SQL Server 2017 Express	MS SQL Server 2019 Express, MS SQL Server 2022 Express
.Net Framework	4.7.2	4.7.2

Database Server

	MINIMAL	RECOMMENDED
Operating System	Windows 10 Professional – 64 Bit	Windows Server 2019 – 64 Bit Windows Server 2022 – 64 Bit
CPU	4 x 2 GHz	8 x 2 GHz
RAM	16 GB	32 GB
free Disk Space	depends on the project (trends, reports, parameters, etc.)	
SQL Server	MS SQL 2017 Express	MS SQL Server 2019 Express, MS SQL Server 2022 Express

Controller / PLC

	MINIMAL	RECOMMENDED
Operating System	Windows 10 Professional – 64 Bit	Windows 10 IoT Enterprise – 64 Bit
CPU	2 x 1,5 GHz	8 x 2 GHz
RAM	4 GB	8 GB
free Disk Space	16 GB	32 GB
SQL Server	MS SQL 2017 Express	MS SQL Server 2019 Express, MS SQL Server 2022 Express
.Net Framework	4.7.2	4.7.2

Visualization Client

	MINIMAL	RECOMMENDED
Operating System	Windows 10 Professional – 64 Bit	Windows 10 Professional – 64 Bit Windows 11 Professional – 64 Bit
CPU	4 x 2 GHz	8 x 2 GHz
RAM	8 GB	16 GB
free Disk Space	10 GB	20 GB
Microsoft Excel	optional	yes
.Net Framework	4.7.2	4.7.2

For Web Visualization

	MINIMAL
supported web browsers	Google Chrome >= 72, Safari >= 12.0.3, MS Edge >= 79
supported mobile OS for XAMControl app	iOS >= 13.0

Programming Station

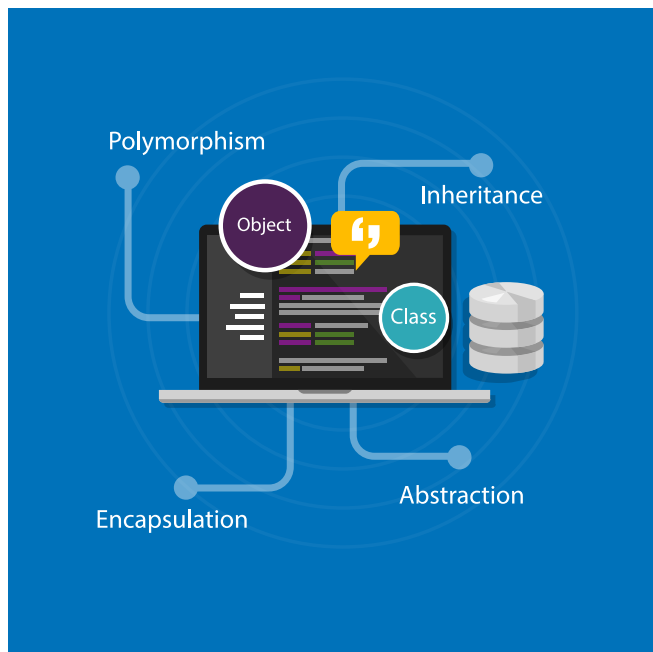
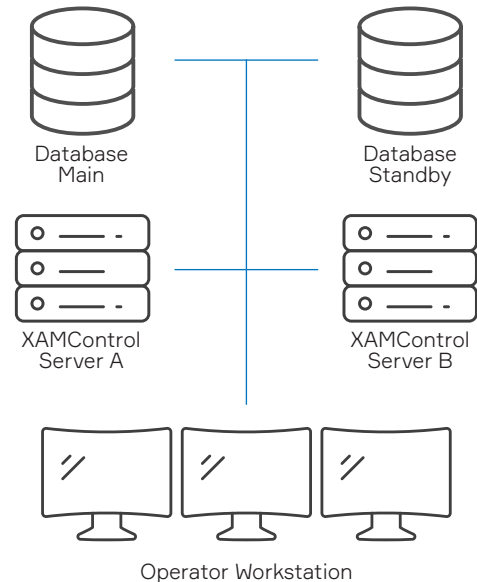
	MINIMAL	RECOMMENDED
Operating System	Windows 10 – 64 Bit	Windows 10 – 64 Bit Windows 11 – 64 Bit
CPU	4 x 2 GHz	8 x 2 GHz
RAM	4 GB	8 GB
free Disk Space	10 GB	20 GB
Microsoft Excel	yes	yes
.Net Framework	4.7.2	4.7.2

For more information on the system requirements, please contact our sales team.

Special features of XAMControl

Redundancy and high availability

- Hot-Standby as integrated system function
- Automatic client switching
- Automatic alignment of online and historical data
- Automatic synchronization of the project files
- Redundant networks (LAN)
- Available of both PLC and SCADA levels
- Database redundancy through to cluster systems for all data

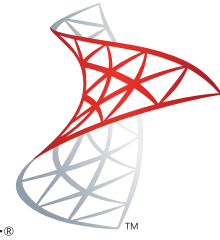


Consequent and consistent object-orientation

- AutomationControlContainer (ACC) brings programs, graphics, operating screens, documentation, alarm and trend configuration, multi-language translation etc. together
- Inheritance of data, methods and graphics
- Data encapsulation
- Defined interfaces on objects
- Nesting of objects
- Locking protection of “Intellectual Property”

Completely based on a database

- Open database model
- Microsoft SQL Server
- High availability via mirroring up to SQL cluster systems
- Simple applications up to big data
- Configuration data (data model, screens, programs, etc.)
- Runtime data (trend, alarm journal, etc.)
- Operational data, production data



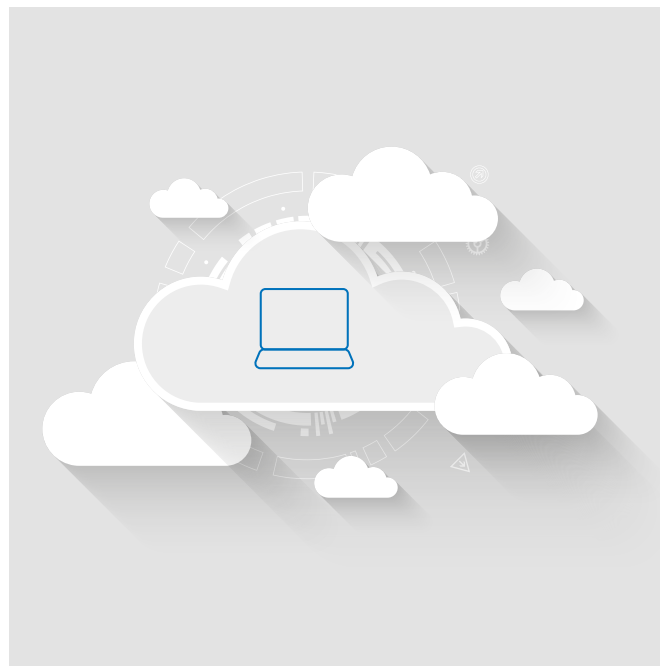
Microsoft®
SQL Server®

Libraries / ACC Store

- Online Store with finished libraries for buildings, industry and traffic
- Over 4,000 automation objects
- Tested, documented and ready to go
- Compatibility
- Faster, better, more efficient engineering
- Private and protected store area for customers

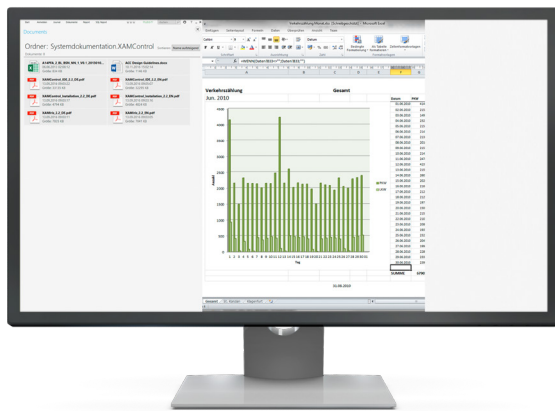
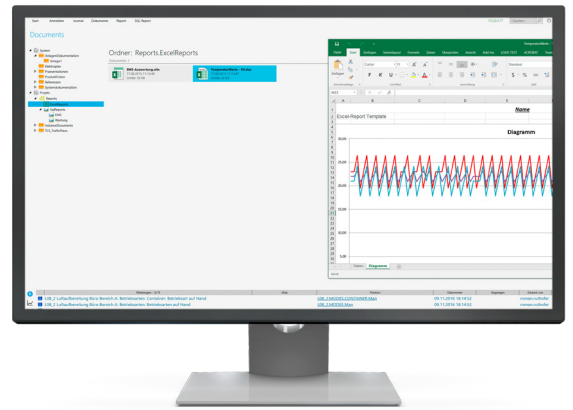
The virtualized PLC

Virtualization on the PLC level in the world of XAMControl means that you program your facility using soft-PLCs in your office environment. Only when you are on-site do you decide which hardware will execute your code. This approach has two advantages: first, you can operate your facility, even if some hardware components are not yet available; second, you are flexible when deciding how many PLCs should be used when distributing your software.



Document management

- Integrated system function
- E-plans, plant documentation, diagrams, data point lists, data sheets, reports, etc.
- Integrated into the user rights system
- Directly editable documents (Word, Excel, etc.)
- Creation of PDFs for others to view
- In a central database

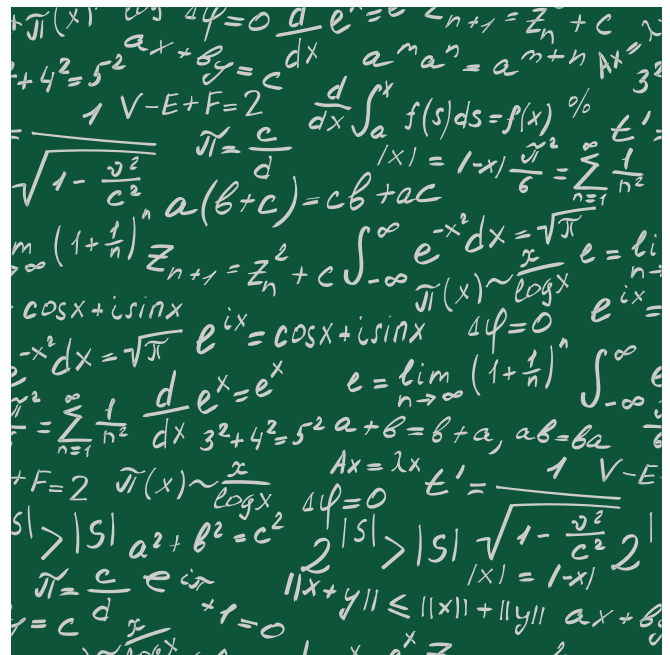


Microsoft Office integration

- Simple operational data evaluation based on automatically created Excel templates
- Online mass data processing and plant configuration
- Simple possibilities for documentation
- From the data point configuration to the import of a complete project (Solution Generator)

Mathematics & Optimization

XAMControl offers a complete work environment for the design of model-based control concepts for plant optimization. This starts with the tools for uncomplicated model generation based on historical data, the incorporation of thermodynamic, chemical or physical models, or a combination thereof. It continues with a wide range of mathematical functions up to complete libraries and modules for various optimization scenarios.



Further information:

Find also additional brochures and technical descriptions about XAMControl on our website:

www.evon-automation.com

Brochure XAMControl
Subject to change
evon GmbH © Stand April 2024

The information contained in this brochure merely contain general descriptions or performance characteristics, which may not always be applicable in the described form to the specific application case or may change due to product advancement. The desired performance characteristics shall only be binding if they are expressly specified upon contract conclusion. All product designations may be brands or product names of evon GmbH or other sub-suppliers, whose utilization by third parties for their rights may violate the rights of the owner.



evon GmbH | Wollsdorf 154 | 8181 St. Ruprecht an der Raab
T. +43(0)3178 21800-0 | **F.** +43(0)3178 21800-110 | office@evon-automation.com
www.evon-automation.com