zenon
Software Platform

zenon
by COPA-DATA

zenon
Designed to make your life easier.

zenon is a software platform that makes the engineering and automated operation of manufacturing and infrastructure equipment incredibly easy. Whether in manufacturing or in the energy industry, if you want to reach your operational goals easily and sustainably, zenon can help.

COMPREHENSIVE SOFTWARE FOR MANUFACTURING AND ENERGY

zenon ensures that equipment runs reliably, flexibly and efficiently. Decision makers, engineers and operators in manufacturing companies and in energy distribution use the abilities of this comprehensive software platform to connect all relevant areas, from project creation through maintenance. As a result, overall equipment effectiveness can be increased.

EMPOWERING PEOPLE

Using zenon, all users – from production through management – can create synergies and make a sustainable impact on business in a measurable and positive way.

ENABLING THE DIGITAL TRANSFORMATION

The zenon software platform provides one integrated environment that combines data recording, machine operation, and business intelligence. This supports your digital transformation.

CHARACTERISTICS

- **Scalability**
  zenon offers optimal, seamless scalability from small to company-wide applications.
- **Robustness**
  zenon is highly robust and provides highest-possible plant availability and operational reliability.
- **Security**
  zenon provides comprehensive security mechanisms and can be seamlessly integrated in holistic security concepts.
- **Performance**
  Increased connectivity leads to an explosive increase of data. For that reason, zenon offers excellent performance.
- **Flexibility**
  Software needs to support dynamic business processes. That's why zenon can be flexibly extended and adapted.
- **Openness**
  zenon is an open platform that supports easy integration into the value chain.
- **Validation**
  For highly regulated industries, zenon provides the opportunity for efficient validation and maximum flexibility within regulations.
- **Ergonomics**
  With a maximum of ergonomics, zenon supports the interaction of man and technology in digitalized processes.
- **Lifecycle Management**
  zenon provides long-term maintenance, customization and update capabilities across the whole lifecycle of the plant.
- **Interdisciplinary Nature**
  zenon combines various disciplines to unlock synergies.

ZENON FOR YOUR CHALLENGES

ANALYTICS AND REPORTING

Do you want to evaluate existing data and derive insights from it?

One of the greatest challenges of the rising flood of data is in evaluating the obtained information and drawing the correct conclusions from it. zenon enables both simple calculations and comprehensive key performance indicators to be generated, in real time or based on stored data.

VISUALIZATION AND CONTROL

Do you want to map and operate complex systems and processes intuitively?

zenon reduces complexity for operators, leading to well-founded decisions. The software platform visualizes wide-ranging processes in real time to give operators control over equipment, whether individual machines, entire production locations, or spanning the whole company.

DATA MANAGEMENT

Do you want to contextualize extensive process data?

zenon makes linking and comparing data simple for entire operations. The software platform displays all relevant information at a glance, even across equipment and locations.

DATA ACQUISITION

Do you want to get detailed information about your production operations and equipment?

Operational data is often not stored centrally, leaving the potential for process optimization untapped. zenon systematically collects, processes, and transfers data to other systems when necessary. Heterogeneous hardware landscapes can be easily connected and expanded. This is made possible by numerous drivers and open interfaces.

APPLICATION ENGINEERING AND MAINTENANCE

Do you want to engineer automation solutions quickly, easily and accurately?

No programming skills are required to create projects, including multi-location projects or those requiring redundancy. Projects are configured by setting parameters, supported by configurable wizards. This even applies to the maintenance and extension of existing applications, regardless of the software version originally used.

ZENON CAPABILITIES

Application Engineering and Maintenance

The zenon software platform offers a strong engineering environment which allows the creation of applications without the need for programming skills. It also allows maintenance to be carried out during the whole industrial product lifecycle. In addition, zenon supports extensive automation of engineering tasks.

Industrial Data Acquisition and Connectivity

Connect all existing industrial devices, such as PLCs, by reading and writing using the zenon platform communication stack. In addition, zenon offers industrial protocols, such as OPC UA. While acquiring data you can validate on the fly, aggregate and pre-process data in a logical way.

Data Recording

Both machine-generated data and manual input can be archived together and processed for later use. The data can be correctly structured, aggregated and contextualized already while being stored. It can also be transferred to linked systems via Gateway.

Data Modeling and Data Management

The zenon platform offers comprehensive options to model and contextualize data across plants and production facilities. Also included: equipment modeling according to ISA-95 as well as extensive options to define and use metadata (e.g. batches, shifts, alarm classes and causes of error). Metadata is consistently available in all platform capabilities.

Human-Machine Interactions

Humans are an integral factor in digitalization. The zenon platform supports them in their actions and decisions. zenon visualizes complex systems and processes clearly, which supports sound decision-making. Intuitive intervention and corrections to existing systems can be done easily.

Control of Machines and Plants

The zenon platform allows you to monitor and control machines and plants. Extensive integrated control mechanisms facilitate correct operation and avoid errors. Depending on the requirement, operation can be administered directly at the machine or remotely. Control happens manually or automatically, by using rules and sequences.

Workflow Management

An integrated workflow engine guides users through defined workflows, either pre-installed or dynamically generated. The integrated recording allows for complete performance documentation. In addition, current process values can be integrated into the controlling workflow or workflow documentation. Another option is to link operational steps and instructions with workflows.

Situational Awareness

Situational awareness with zenon includes the presentation of relevant process values in realtime as well as remote alarms. Background information and alarms are processed live and are context-based. They are intuitively and clearly visualized and distributed to the relevant persons.

Universal Access and Operation

zenon allows access to dashboards as well as to reports over a browser, making sure authorized platform users can access relevant information remotely. As an option, remote operational tasks are also possible.

Rights Management

The zenon platform allows extensive and granular allocation and administration of rights, differentiating between data access and operational rights. The rights system regulates interactions between users as well as third-party systems accessing via API.

Universal Communication

zenon's open interfaces enable communication between machines and plant, as well as the seamless integration of shop floor and business operations. Open standards such as OPC UA and standardized interfaces (e.g. with ERP) facilitate implementation. In this way, zenon promotes the IT/OT convergence.

Distributed Intelligence and Networking

zenon facilitates the appropriate distribution of local and centralized intelligent units. These units can be networked easily and securely. Complex overall architectures thus stay scalable and simple to maintain.

Device and Asset Management

zenon enables you to manage physical plants, which are mapped and integrated including their metadata. Furthermore, by enrichment with process data, a digital twin can be displayed. zenon's asset management promotes efficient maintenance and supports the plant's lifecycle management.

Scheduling

zenon allows for control and documentation based on shift information. In addition, shift data is used as meta-information to calculate key figures and reports. Shift data can also actively be used to control plants and facility infrastructure.

Reporting and Data Evaluation

zenon can compile and visualize historical data into reports and trend graphics. Reports can be manually retrieved or automatically created and distributed. In order to analyze historical process states, zenon has a 'record and play back' functionality.

Analytics

To turn data into information, zenon uses various analytical components. Capabilities extend from simple calculations, such as key figures, to complex analysis for statistical process control. Information can be compiled in realtime or based on historical data. There is also an option for forecasting.

Simulation

zenon's simulation capability lets you test projects under real-life conditions during their creation. It also saves time when preparing a launch or commission. In addition, simulation is used for training purposes as well as for the analysis and maintenance of plant components.

Logging and digital Forensics

If required, zenon logs itself and the state of external components such as network infrastructure. Extensive analytic tools allow for efficient optimization and fault detection.

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ABOUT COPA-DATA

COPA-DATA is an independent manufacturer of software for industrial and energy automation. Its products are used in the manufacturing and energy industries for the automated control, monitoring, and optimization of machines, equipment, and power supplies. COPA-DATA combines a wealth of experience in automation with new opportunities for digital transformation, and helps customers to put their strategies into practice in an easier, faster, and more purposeful way.

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