

Industry 4.0

Technologies for the journey to a Smart Factory

The Internet of Things (IoT), the growing number of networked devices in production and the development of the Smart Factory offer manufacturers the perfect opportunity to significantly increase their productivity, quality and flexibility. They can thereby secure their future competitive position and profitability.



Amongst other things, Industry 4.0 covers topics such as the Internet of Things (IoT), increased networking with customers and suppliers, cloud computing or the use of mobile devices in production processes. The use of innovative solutions in production companies enhances competitive advantage.

FLEXIBLE ARCHITECTURES AND VENDOR-INDEPENDENT CONNECTIVITY

zenon offers over 300 communication protocols for networking heterogeneous production landscapes. The user determines the hardware that they work with, because zenon communicates independent of hardware and manufacturer. New machines or modules can be quickly included and easily integrated.

VERTICAL INTEGRATION

Vertical integration with zenon ranges from the sensor through to the ERP – or the cloud. Integration functions entirely bi-directionally. This allows both the exchange of data and status messages, as well as control commands.

HORIZONTAL COMMUNICATION

M2M communication is an important component of a Smart Factory. When using zenon on several machines and items of equipment, multi-project administration and the straton Binding protocol offer very powerful integration capabilities. It is precisely in such a heterogeneous environment where zenon's native ability to communicate plays a decisive role for horizontal integration with other solutions.

CLOUD INTEGRATION

Globally operating businesses with geographically distributed production sites frequently face the challenge of having to optimize their products. Energy output, quality or other efficiency criteria are often only considered locally, from one location. By connecting information flow from zenon in the cloud concepts such as energy management, OEE etc. can be pursued on a global level.

Furthermore, data that is collected in the cloud can be used for Big Data or predictive applications.

SECURITY

COPA-DATA is approaching this topic in order to meet the requirements of networked production facilities. Integrated security technologies and concepts such as Security by Design can support you to build-up secure production operations.

FAST FACTS

- ▶ Vendor-independent connectivity
- ▶ Horizontal M2M communication
- ▶ Vertical integration of embedded device via the PC to the cloud
- ▶ Flexible and scalable

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Horizontal integration with zenon	<ul style="list-style-type: none">▶ Over 300 native communication protocols▶ Multi-project administration▶ Client/Server – Server/Client topology▶ straton Binding▶ Application programming interface (API)
Vertical integration with zenon	<ul style="list-style-type: none">▶ Over 300 native communication protocols▶ ERP interface (SAP ERP, Microsoft Dynamics)▶ SQL Server Interface▶ Web Server▶ Everywhere Server (Smartphone Apps)▶ Cloud integration
Cloud solution with zenon	<ul style="list-style-type: none">▶ Supports local and company-wide transparency▶ Clear dashboards, global information in real time or historical analyses▶ Close collaboration with technology partners such as Microsoft
Use with mobile devices	<ul style="list-style-type: none">▶ Access to production data with smartphone or tablet
Intelligence of embedded device via the PC to the cloud	<ul style="list-style-type: none">▶ With straton and zenon Logic, the IEC 61131-3 development environment and Runtime▶ Can run on microcontrollers, PCs and in the cloud
Flexible architectures	<ul style="list-style-type: none">▶ Implementation of flexible architectures according to requirements with the straton, zenon Logic, zenon and Batch Control components