



FOURZERO™



Development Platform for Control Networks

Inspiration for Digital Automation

FourZero - designed for Industry 4.0

The Industry 4.0 initiative has been launched by the German industry, government, research institutions and universities to describe the upcoming generation of digital manufacturing.

It provides guidance for the direction of the manufacturing evolution and a comprehensive description of needed technological features.

In summary, modern manufacturing is facing two main challenges:

- Mass production rapidly progresses to mass customization and individual product production. This requires highly adaptable manufacturing capability. Leading to modular machine design, production processes with flexible order of processing, work piece movement by autonomous transport vehicles, self-configuring processes and machines communicating with each other and with ERP and MES systems for collaborative production.
- New business models rise through data collection for predictive maintenance and system health checks, automatic resupply of working materials via cloud based software, data collection for sales purposes, and many more. Data are constantly moving through the cloud to accommodate the new business. For this digital copies of the real world are created, forming a Cyber Physical Production System. The digital copies are used for simulation of the real world. The simulations will also receive feedback data from the real world.

The biggest challenge of it all is to master the complexity which arises from the above, especially in inhomogeneous environments with a mix of equipment and devices from different manufacturers and different product generations.

There are numerous reasons why FourZero is the ideal tool to create devices for Industry 4.0:

- FourZero is designed for [changing environment](#). Encapsulation and modularization let the FourZero users always be prepared for the future.
- FourZero's distributed system programming allows the creation of [collaborative systems](#) of sensors, actuators and controllers.
- FourZero's Publish and Subscribe communication handles [dynamic networks](#).
- FourZero creates Digital Copies for [Cyber Physical Systems](#) by virtualization
- Hardware independent programming by FourZero facilitates built in [simulation](#)
- [Modular machine design](#) enabled by FourZero: Elevate machine control from central PLC architecture to distributed controller network
- FourZero breaks up the [automation hierarchy](#)
- [DataBazar](#) instead of DataBase: How to handle large amounts of data from various sources

Click on the links above to find out more about how FourZero changes [data sheet](#).

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