



# Preparing machines and systems for the connection to Industry 4.0 infrastructures

Build it in.



**The concept of Industry 4.0 is rapidly gaining momentum throughout many industries in Europe. The machine building and system integration sectors, in particular, are following this upwards trend. Interestingly, it is not just large companies – Small and Medium-Sized Enterprises are increasingly starting to implement strategies and solutions that connect their products to the digital factories of the future.**

End-Customers in the Industry have started the journey to convert their production sites into 'smart' factories already. More and more of them will be asking for machines that can be smoothly integrated into these environments, providing comprehensive data and offering connectivity and communication based on standards protocols.

Please read the summary of the white paper on the next page.



It has been several years since the first generation of Information Technology (IT) found its way into the automation part of machines. Today control systems based on industrial PCs are as widely accepted as conventional PLC control systems. Ethernet Fieldbus systems are replacing the former serial systems that may not be able to handle the increasing volume of data.

The next step is the use of smart components in applications to provide more valuable data that helps to increase productivity and machine uptime. In the white paper entitled: "Preparing machines and systems for connection to the Internet of Things (IoT)" Eaton's Christian Zingg and Stefan Selke provide an inside view into Industry 4.0 terminology and its interrelation.

In addition, they give guidance on how machine builders could integrate Cyber Physical Systems (CPS), Modularization and Smart Devices into their own products and how this would help them to improve flexibility and reduce engineering costs.

Data is one of the core resources in the digital world. But data produced within a machine or process would need to be converted into usable information. The paper answers question such as: How could this data help improve

processes and identify problems should they occur in the application? How and when would this data be produced and made available to the right person who could interpret it?

There are only few industries where communication and interconnectivity is as complex as in the industrial automation business, where several well-established Fieldbus technologies compete. Therefore 'standardization' is one of the core elements of the Industry 4.0 approach. Open communication standards are quickly developing in the market and with every additional company that joins the respective user group the momentum increases. These standards can be used for both Machine-to-Machine communication within the factory and external communication into secure data handling systems.

A final scenario shows how even small and medium-sized machine builders could easily participate and benefit from these new possibilities. When technologies become as easy as 'plug-and-play' even those companies could gain a competitive edge by making their machines 'IoT-Ready'.

**To find out more, please download the white paper here: [www.eaton.eu/en/iw/iot](http://www.eaton.eu/en/iw/iot)**