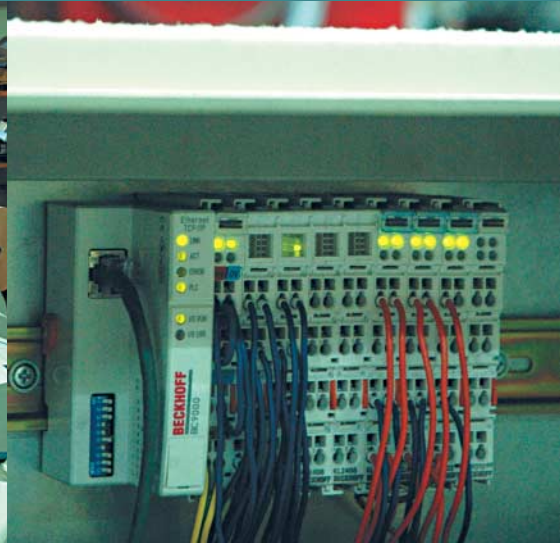


Adargo Press and Plastal use Ethernet components from Beckhoff with great success

→ The Swedish market is characterized by a significant growth in Ethernet-based automation for industrial applications. Ethernet components from Beckhoff have become established as a de facto standard. In Sweden there is also strong interest in the EtherCAT real-time Ethernet solution, which was awarded the title of "most innovative automation solution" at "Scanautomatic 2003". The companies Adargo Press and Plastal are good examples for the application of Ethernet in automation.



Adargo Press: Ethernet communication with compact controllers

The printing company Adargo Press AB prints some of Sweden's largest newspapers: "Aftonbladet", "Metro" and "Dagens Industri". Like in almost all industries, Adargo can only remain competitive by making optimum use of its machines. Matthias Andersson, who designed the system for DCOS AB, explained: "The machinery is now a few years old and works perfectly, apart from a certain lack of functionality. For increasing flexibility, the visualization and main control system was modified and the functionality of the roll changer, which automatically changes paper rolls during operation, was upgraded."

Adargo Press AB decided to use the compact BC9000 Ethernet controllers from Beckhoff for improving the functionality of the roll changer. Ethernet is used for the communication between the main controllers, the BC9000 controllers and a PLC from Mitsubishi. The main controller communicates with the Bus Terminal Controllers via OPC server.

The decision to use the Ethernet Bus Terminal Controllers from Beckhoff had several reasons. Matthias Andersson explained: "It made sense for us to use an Ethernet-based bus system, because in our factory we don't have any other fieldbus. Another good reason for using Ethernet was that it is a widespread network standard that requires no special expertise for setting up."

"Furthermore, the BC9000 is very versatile, since it is easily expandable with further Bus Terminals. The Bus Terminal Controller currently controls the roll changer, although additional functions may be implemented if required," Matthias Andersson continued. Programming and setup via TwinCAT are straightforward due to the international IEC 61131-3 standards.



Plastal: Ethernet communication for I/Os in quality management systems

Plastal AB produces plastic components for Saab, Volvo, Scania and other motor vehicle manufacturers. The buyers are very demanding when it comes to quality and just-in-time delivery. In the Uddevalla plant, Plastal pre-assembles bumper systems and produces interior plastic components for the SAAB models 9-3 and 9-5.



In order to meet the exacting requirements, a quality management system is used for ensuring that the products have the correct color and are installed correctly depending on the respective type of car. In cooperation with the company Else AB from Gothenburg, a PC-based quality and logistics systems was developed that communicates with SAAB's ordering system and with the Movex internal disposition system.

In terms of I/O communication, it made sense to use Ethernet, since it was already being used on several PCs. The BK9000 Ethernet Bus Coupler from Beckhoff was used for the Ethernet connection to the test facility. Communication is either via TwinCAT ADS or alternatively via Modbus TCP. Since the company Else already had experience with Modbus, this protocol was chosen as the communication basis.

New fieldbus communication era

These application examples illustrate how the versatile and reliable Ethernet-based products from Beckhoff are used in an increasing number of industrial applications. As the next fieldbus generation, EtherCAT will set new standards for communication via Ethernet in control systems.

Björn Forssberg, managing director of Beckhoff Sweden, is convinced that EtherCAT heralds a new era for fieldbus technology. "For me, the benefits of this technology that are currently apparent are only the tip of the iceberg. Due to its high performance, EtherCAT will lead to significant changes in automation. We supply PC-based controllers, and Ethernet obviously gives us a significant advantage over our competitors. Today we are already experiencing significant growth in Ethernet products, particularly the BC9000 Ethernet controller that can handle distributed intelligence and non-time-critical data processing via Ethernet."