Press Release

New: EtherCAT now also a factory network

EtherCAT is a well-established technology for machine level control networks. Now the EtherCAT Technology Group (ETG) has also put a focus on the factory network, enhancing the EtherCAT specification by defining services for the supervisory control level. As a result, EtherCAT now also comprises the Ethernet communication between control systems, as well as to the supervisory systems. The new EtherCAT Automation Protocol (EAP) simplifies the direct access of process data from field devices at the sensor / actuator level and also supports the integration of wireless devices.

For the factory level, the base protocols for process data communication have been part of the EtherCAT specification from the very beginning. Now the ETG has enhanced those with services for the parameter communication between control systems and for routing across system boundaries. Uniform diagnostic and configuration interfaces are also part of the EAP. It can be used in switch-based Ethernet topologies as well as via wireless Ethernet. Process data is communicated like network variables, either cyclically or event-driven. Both the classic EtherCAT Device Protocol, which utilizes the special EtherCAT functional principle of "processing on the fly," and the new EAP make use of the same data structures and facilitate vertical integration to supervisory control systems and networked controllers.

Development of the EtherCAT Automation Protocol was kicked off in March 2009. The corresponding ETG working group plans to publish the specification in January 2010. Since EAP mainly uses already available protocols and services, for example, those already implemented in many EtherCAT control systems for access to field devices from outside via TCP/IP, it is a fully compatible enhancement of the standard. While EAP handles the communication in the millisecond range on the process control level and between control systems, the EtherCAT Device Protocol handles I/O and motion control communication in the field level in the microsecond range.

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EtherCAT sets new standards for real-time performance and topology flexibility, while meeting or undercutting traditional fieldbus cost levels. EtherCAT features include high precision device synchronization, cable redundancy options, and a functional safety protocol (SIL3). EtherCAT is an international standard (IEC, ISO and SEMI).

The **EtherCAT Technology Group (ETG)** is an organization in which key user companies from various industries and leading automation suppliers join forces to support, promote and advance EtherCAT technology. With over 1100 members from 47 countries, the EtherCAT Technology Group has become the largest organization in the world that is exclusively focused on Industrial Ethernet technologies. Founded in November 2003, it is also currently the fastest growing fieldbus organization.

➔ For further information please also see **www.ethercat.org**