



Thanks to EoE with Ethernet into the EtherCAT network

Industrial Ethernet has become an indispensable part of automation. In addition to PROFINET and Ethernet/IP, Dunkermotoren, a brand of AMETEK Advanced Motion Solutions, also supports the Industrial Ethernet protocol EtherCAT. The advantages of EtherCAT are increased speed, reduced data traffic and precise data due to distributed clocks. And by the way, EtherCAT also comes with comparably lower hardware costs. With EtherCAT, you have an excellent real-time Ethernet for controlling BG(E) *dPro* EC motors. Compared to other Ethernet-based bus systems, an EtherCAT master optimizes communication specifically for the topology of the network. New devices, such as a PC for adapting the motor control or analyzing the motor data, can thus not be introduced easily into an existing network.

And this is where EoE comes up:

With EoE (Ethernet over EtherCAT), an Ethernet network can be connected to an EtherCAT network. The master can then "tunnel" the Ethernet protocol over the EtherCAT protocol. This means that the Ethernet protocol is packaged into the EtherCAT protocol and sent from the EtherCAT network to a specific Ethernet node via a switch port.

The advantages of EoE are that the real-time capability of the EtherCAT network is not violated and the data traffic remains collision-free and fully duplex. Furthermore, certain devices can be addressed directly via their respective MAC address. This gives the customer the possibility to implement internet technologies such as a web server in his EtherCAT network.

For Dunkermotoren in detail, this means that a motor from Dunkermotoren can be accessed via Drive Assistant 5 without violating the existing topology with the defined master. This enables the customer to perform condition monitoring, analyze the motor or make remote adjustments. EoE makes all IIoT features conceivable in an EtherCAT network.

EoE is available for all motors and external electronics from Dunkermotoren of the *dPro* family with Industrial Ethernet from firmware version 24.01.0.

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