

STEINBEIS-TRANSFERZENTRUM SENSOREN UND SYSTEME FÜR DIE AUTOMATISIERUNG



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CANopen Networks: Implementation and Configuration Aspects

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Since CANopen communication and device profiles are available the influence of this CAN communication standard is increasing througout the CAN in automation arena. Various CANopen-based components as well as OEM protocol implementations are available. This contribution concentrates on experience drawn from software implementations on different devices and set-up of CANopen networks. The software structure of network master and slave devices is presented in detail together with realisation hints. Achieved performance in terms of code execution time and consumption of hardware resources are described.

The configuration of CANopen devices and set-up of complete networks by the user forms the second section. Tools are presented which allow the access to object dictionaries of devices via electronic data sheet and parameter up- and download. Graphical user interfaces allow the layout of CANopen networks, support the distribution of identifiers and the cooperation of bus nodes.

Finally an application example in form of a multivendor system with several controllers, decentralized Input / Output devices and multiple drives is given.