CAN *Newsletter Online*

CiA DOCUMENTS

Specifications and recommendations updated

CAN in Automation (CiA) has revised several CANopen profile specifications. Additionally, the nonprofit association has released the CiA 106 technical report containing pin-assignment recommendations for connectors.

The first CAN pin-assignment recommendation for 9-pin Dsub connectors was published 30 years ago by CiA (Source: Provertha)

Recently, the profiles for motor starters (CiA 442), spreaders (CiA 444 series), RFID devices (CiA 445), and programmable power supplies (CiA 453) have been updated. They have been released as Draft Specifications (DS). CiA members can download them free of charge from the CiA website. Non-members can subscribe to the CiA 4XX series for one year, which comprises all documents in DS state of this series.

CiA 442 specifies the CANopen interface of devices compliant with IEC 61915-2. The new version includes editorial improvements and provides some clarifications. The profile covers motor starters, soft starters, and motor management starters. The CiA 444 series provide CANopen interface specifications for different spreader types used for container-handling equipment. This includes harbor cranes and straddle carriers. The CiA 445 profile for RFID reader and writer devices has not been improved technically. The specification covers three types of RFID readers: fixed reader, handheld devices, and mobile readers. Basically, a reader consists of a receiver, a transmitter, an oscillator, a controller/processor, and an antenna. The profile does not specify pre-defined PDO mappings. The updated version of the CiA 453 profile for programmable power supplies provides additional data objects and introduces new thresholds. It is suitable for power-supply devices with single or multiple outputs. These outputs can be voltage-, current-, or power-controlled.

All CiA specifications are going to apply the inclusive language guidelines by international standardization bodies. Especially, the terms "master" and "slave" are substituted by appropriate terms. In CANopen, the terms "manager" "and "server" are used, e.g. NMT manager respectively NMT server or LSS manager respectively LSS server. This reflects the communication behavior, where the servers only communicate on request of the manager.

CiA has also released the CiA 106 technical report. It contains the CANopen connector pin-assignment recommendations from the predecessor CiA 303-1 document plus references to other pin-assignment specifications and standards. CiA 106 is a single-source reference for CAN connectors independent of the used higher-layer protocols or the application field. The document can be downloaded free of charge from the CiA website.

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