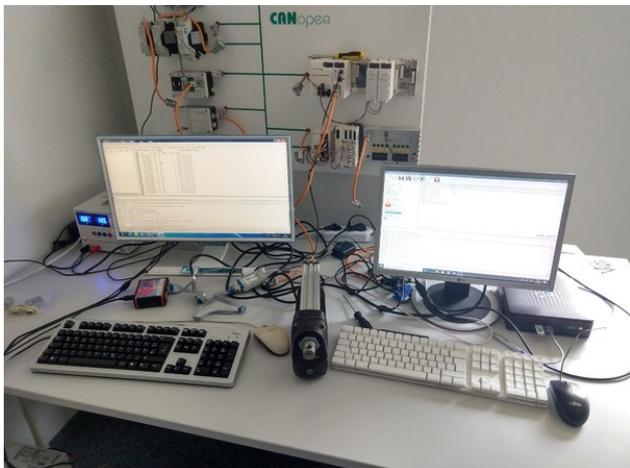


CAN Newsletter Online

CiA 301 OR CiA 1301 COMPLIANT

CANopen (FD) devices certified by end of May 2022

Since the beginning of 2022, CAN in Automation (CiA) successfully tested four CANopen devices. The first CANopen FD device was tested as well.



CANopen and CANopen FD devices are tested in an example network located in the office room of a CiA testing engineer (Source: CAN in Automation)

DMG (Italy) received a CANopen certification for its Giotto TFT position indicators available in 4,3-inch, 5-inch, 5,6-inch, 7-inch, and 10,1-inch versions also available as vandal resistant variants. The device dedicated for use in [lifts and elevators](#), allows to associate pictures and voice messages to every floor. Due to its embedded accelerometer, it detects the landscape mounting position and adapts its screen automatically. The autonomous positioning system enables visualization of the lift position and direction independently from the controller. The system uses sensors' signals installed on top of the car. It can be customized using a USB stick and dedicated software. A graphic programming interface is available. The indicators support 65000 colors, up to 24 pictures assignable to floors, three indicators (e.g. for alarms, backup power) as well as an emergency light feature.

CiA offers services of an [independent testing center](#). CANopen or even CANopen FD devices can be tested regarding their compliance to CiA 301 (CANopen) or CiA 1301 (CANopen FD). Additionally, the interoperability of CANopen devices can be tested in an example network. The successful test completion enables manufacturers to prove to their customers that their [CiA-certified products](#) are CANopen or CANopen FD compliant.



Giotto TFT position indicators (Source: DMG)



Roboservo cylindrical motor modules from the M series (Source: Futaba)

Futaba (Japan) obtained two certificates for its M series Roboservo cylindrical motor modules with included drive electronics. The RBS4M070HT16N16C0000 and RBS4M080HT36N16C0000 provide rated torques of 16 Nm (27 W) respectively 36 Nm (60 W). The modules are 126 mm and 135 mm long with outer diameter of 70 mm and 80 mm. They comprise incremental and absolute encoders as well as sensors for voltage, current, and temperature measurements. Additionally, they include an [inertial measurement unit](#) (IMU) providing a body's specific force, angular rate, and orientation. The devices support the CANopen device profile for drives and motion control ([CiA 402](#)) as well as the ROS (robot operating system), which is a set of software libraries and tools for robot applications. Operating at temperatures from 0 °C to +40 °C, the cylinders require a supply voltage of 48 V_{DC}.

The I/O module [PCAN-Micromod FD DR CANopen Digital 1](#) from Peak-System (Germany) passed the conformance tests for CANopen and for CANopen FD. The device firmware is based on the Micro CANopen Plus protocol stack by Embedded Systems Academy (Emsa). Four dials are sufficient to make the settings, which are documented directly on the housing. CANopen EDS (electronic data sheet) and XDD (extended device description) files are available for download for all PCAN-Micromod FD products documenting the CANopen or CANopen FD functionality. Furthermore, the PCAN-Micromod FD evaluation board includes a free CANopen FD license.

The FLX0-GCAN100 gateway module from the Flexi Compact series by Sick (Germany) enables a safety controller to exchange data with a CANopen network for control and diagnostic purposes. The device can be configured via the built-in TFT display using the company's Safety Designer software. Diagnostics information is also available via the display. For the CANopen network link a 9-pin D-Sub plug connector is available. The IP20-rated device dimensioning 18 mm x 124,7 mm x 85,5 mm, weights 105 g and can be mounted on a DIN rail (35 mm x 7,5 mm). It operates at



PCAN-Micromod FD DR CANopen Digital 1 from Peak-System (Source: Peak-System, Emsa)

ambient temperatures of -25 °C to +55 °C. Additionally, in 2021 and 2020, the manufacturer gained the CANopen certificates for its [GLS100 line guidance sensor](#) and [MLS magnetic line guidance sensor](#).

[of](#)



FLX0-GCAN100 gateway module (Source: Sick)