



CAN FD/CAN Gateway CG-FD/E

Special Features

- Support for CAN FD and CAN CC (Classic CAN)
- Connection of CAN CC with CAN FD systems
- Connection of CAN systems with differing data rates
- Filtering and buffering of data traffic
- Mapping of identifier between input and output
- Cortex M4 Microcontroller running at 160 MHz with 2 internal CAN FD controllers
- USB interface for configuration and optional power supply
- Extended supply voltage range
- Extended temperature range
- Optional DIN Rail mounting

Description

The CAN FD/CAN gateway CG-FD/E is designed for applications where high flexibility is crucial. The extended values of supply voltage and operating temperature range meet typical requirements of automotive applications. The USB interface is used to configure the device and to optionally provide supply voltage. The configuration tool `cg-fd-tool` is in the scope of delivery and offers an intuitive way to set up the gateway.

Among available functions of the standard firmware are data rate adaption, message filtering as well as identifier conversion between the coupled busses. The restriction of the maximum data rate depending on cable length for a CAN or CAN FD segment can be abolished for the over-all system by use of CG-FD/E.

CG-FD/E obtains its potential through the use of a Cortex M4 microcontroller with 160 MHz clock. High speed processing and low latencies allow the use with high data rates and busloads.

Technical Data

Layout and Connection

The connection of the CAN bus and power supply is done by a D-Sub9 male and female plug. The supply voltage is not feed through. An USB interface is provided for configuration, firmware download and optional power supply.

Limiting Values

| Parameter | Minimal | Maximal | Unit |
|-----------------------------------------|---------|---------|------|
| Storage temperature | -40 | +85 | °C |
| Operating temperature | -40 | +85 | °C |
| Supply voltage | -40 | +35 | V |
| Supply voltage via CAN connectors | -40 | +30 | V |
| Admissible power consumption (at 60 °C) | - | 2000 | mW |

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CG-FD/E and other connected devices. Exposure to limiting conditions for extended periods may affect the reliability and shorten the life cycle of the device.

Nominal Values

| Parameter | Minimal | Typical | Maximal | Unit |
|-------------------------------------------------|---------|---------|---------|--------|
| Current consumption (running idle) | - | 20 | - | mA |
| Current consumption (250 kBit/s, 100 % busload) | - | 35 | - | mA |
| Supply voltage | 9 | 24 | 30 | V |
| CAN baud rates | 10 | - | 4000 | kBit/s |

All values, unless otherwise specified, refer to a supply voltage of 24 V and an environmental temperature of 20°C.

Scope of Delivery

- CAN FD/CAN gateway CG-FD/E
- USB connection cable
- User manual
- Configuration software