



CAN/CAN Gateway CG-ARM7

Special Features

- Connection of CAN subnetworks with differing data rates
- Filtering and buffering of data traffic
- Support of 11 bit and 29 bit identifiers
- Increase of the system expansion
- Microcontroller NXP LPC2119 with 2 internal CAN controllers

Description

The rail mountable CAN/CAN gateway CG-ARM7 transmits CAN signals between subsystems. CG-ARM7 allows a flexible design of the wiring topology. Star and tree structures as well as extensive line structures can be realised.

The gateway includes two CAN interfaces and supports both data and remote frames for 11 bit as well as 29 bit identifiers. Among the available functions 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 single CAN segments can be abolished for the over-all system by use of CG-ARM7.

CG-ARM7 obtains its potential through the use of a 32 bit microcontroller with 48MHz clock. High speed processing and low latencies allow the use with high data rates and busloads. Cost efficient series applications are particularly promoted by use of CG-ARM7.

The configuration of the device functions can take place either through CAN or through the built-in RS232 interface. Download software for the configuration is available for Windows PCs as well as Linux PCs.

CG-ARM7 is available in version HS/LS allowing the conversion of high speed to low speed CAN.

Technical Data

Layout and Connection

The connection to the CAN busses is achieved via pluggable terminals. Besides the CAN signals the clamps also carry the supply voltage for CG-ARM7. The following table shows the pin assignment of the internally connected interfaces.

| Pin | Name | Function |
|---------|--------|----------------------------------|
| 1 | +24V | Supply voltage |
| 2, 3, 6 | GND | Ground |
| 4 | CAN1-H | CAN1 signal line (dominant high) |
| 5 | CAN1-L | CAN1 signal line (dominant low) |
| 7 | CAN2-H | CAN2 signal line (dominant high) |
| 8 | CAN2-L | CAN2 signal line (dominant low) |

Limiting Values

| Parameter | Minimum | Maximum | Unit |
|--|---------|---------|------|
| Storage temperature | - 20 | + 80 | °C |
| Operating temperature | 0 | + 60 | °C |
| Supply voltage | - 100 | + 35 | V |
| Voltage on bus connections | - 30 | + 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-ARM7 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 | Minimum | Typical | Maximum | Unit |
|--|---------|---------|---------|------|
| Current consumption (running idle) | – | 50 | – | mA |
| Current consumption (250kBit/s, 100% load) | – | 70 | – | mA |
| Supply voltage | 12 | 24 | 30 | V |

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

Scope of Delivery

- CAN/CAN Gateway CG-ARM7
- Plug-in terminal with screw terminal
- User Manual
- Configuration software