USB/CAN FD Interface CPC-USB/FD

Special Features

- CAN FD interface for industrial applications
- Powerful Cortex M4 microcontroller with internal CAN-FD and USB controller
- Display of USB communication and CAN data transfer via LEDs
- Supply completely over USB
- USB 2.0 high speed
- Galvanic isolation between PC and CAN bus
- DC Bus fault protection voltage ±70 V
- Linux socketCAN is in progress
- Free of charge development kits for Windows 7/8.x/10/11 and Linux

Description

CPC-USB/FD is a CAN FD interface for USB ports in a compact and robust metal housing. Due to easy handling and favorable price CPC-USB/FD is suitable for configuration and analysis of CAN FD systems.

CPC-USB/FD is equipped with a Cortex M4 microcontroller providing onChip CAN FD and USB controller. By combining the powerful CPU with internal peripherals low latencies can be achieved. This is supported by the high speed USB connection. The interface is powered via USB, a separate supply for the CAN side is not needed.

The interface includes galvanic isolation. The used CAN FD transceiver tolerates DC fault voltages up to ±70 V on the CAN bus lines.

For the operating systems Windows and Linux software development kits with identical API are available free of charge. The driver is executable with existing application software of the CPC-USB/ARM7 V2.0. Linux socketCAN is in progress, please contact us.

Technical Data

Layout and Connection

CPC-USB/FD includes a CAN segment connected by a male plug of type D-Sub9, the pin assignment is complying to CiA DS-102. In addition the interface includes a USB connector that also carries the supply for CPC-USB/FD. The used transceiver meets ISO 11898-2:2016 and ISO 11898-5:2007.

The following table shows the assignment of the CAN connector:

Pin	Name	Description
2	CAN_L	CAN bus line (dominant low)
3	GND	Ground
7	CAN_H	CAN bus line (dominant high)

Limiting Values

Parameter	Minimal	Maximal	Unit
Storage temperature	-20	+80	°C
Operating temperature	0	+60	°C
Supply voltage	0	+6	V
Voltage on bus connections	-70	+70	V

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CPC-USB/FD 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 (idle mode)	-	100	-	mA
Current consumption (operation mode)	-	-	250	mA
Supply voltage	4,0	5,0	5,5	V

All values, unless otherwise specified, refer to a supply voltage of 5 V and an environmental temperature of 20 °C.

Scope of Delivery

- USB/CAN FD interface CPC-USB/FD
- USB connection cable
- User manual
- proCANtool CAN-Monitor for operating systems Windows 7/8.x/10/11 is provided as a download (digital service). A data medium (e.g. CD) will be sent on request.