



## USB/CAN Interface CPC-USB/ARM7

### Special Features

- Powerful Cortex M3 microcontroller with internal CAN and USB controller
- Supports CAN protocols 2.0A and 2.0B
- Display of USB communication and CAN data transfer via LEDs
- Supply completely over USB
- Optional with galvanic isolation between CAN and USB
- Optional with low speed transceiver TJA1054A
- Optional with  $\pm 80$  V tolerant CAN transceiver MAX13052
- Optional available with RJ45 CAN connector
- Linux socketCAN is supported
- Free of charge development kits for Windows 7/8.x/10/11 and Linux

### Description

CPC-USB/ARM7 is a CAN interface for USB ports in a compact and robust metal housing. Due to easy handling and favorable price CPC-USB/ARM7 is suitable for configuration and analysis of CAN systems.

CPC-USB/ARM7 is equipped with a Cortex M3 microcontroller providing onChip CAN and USB controller. By combining the powerful CPU with internal peripherals low latencies can be achieved. The interface is completely supplied via USB, a separate supply for the CAN side is not needed.

The interface is optionally available with galvanic isolation. In addition also a variant with low speed transceiver TJA1054A is available. For applications, where a higher fault voltage on the CAN bus terminals cannot be avoided, the version HV is available. The use of the transceiver MAX 13052 allows voltages up to  $\pm 80$  V on the CAN bus lines. Also a version with RJ45 CAN connector is available.

For the operating systems Windows and Linux software development kits with identical API are available free of charge. SocketCAN is supported.

## Technical Data

### Layout and Connection

CPC-USB/ARM7 includes a CAN segment connected by a male plug of type D-Sub9, the pin assignment is complying to CiA DS-102 for the standard version. In addition, the interface includes a USB connector that also carries the supply for CPC-USB/ARM7.

The following table shows the assignment of the CAN connector:

Pin	Name	Description Standard Version	Description Low Speed Version
1	RTL	Not connected	Connected with Pin 2 by a 5k6 resistor and with dedicated Pin of TJA1054 CAN transceiver
2	CAN_L	CAN bus line (dominant low)	CAN bus line (dominant low)
3	GND	Ground	Ground
7	CAN_H	CAN bus line (dominant high)	CAN bus line (dominant high)
8	RTH	Not connected	Connected with Pin 7 by a 5k6 resistor and with dedicated Pin of TJA1054 CAN transceiver
4, 5, 6, 9	-	Not connected	Not connected

### 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, standard version	-30	+30	V
Voltage on bus connections, LS version	-27	+30	V
Voltage on bus connections, HV version	-80	+80	V

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CPC-USB/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	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 interface CPC-USB/ARM7
- USB connection cable
- User manual
- proCANtool CAN-Monitor for operating systems Windows 7/8.x/10/11