



Serial/CAN-Gateway SerCAN-ARM7

Special Features

- Protocol conversion between CAN and RS232 serial interfaces
- Transparent transmission of serial data streams over the CAN bus
- Transparent transmission of CAN messages over serial interfaces
- Configurable filtering of received CAN messages
- Microcontroller NXP LPC2119 with internal CAN controller
- Rail mountable, wide power supply range

Description

SerCAN is a protocol converter between CAN and devices with RS232 interfaces. SerCAN allows the connection of devices with serial interfaces to CAN based systems, e.g. measuring devices, barcode scanners and handheld terminals.

SerCAN 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.

SerCAN covers the typical applications for protocol conversions. If SerCAN is used as universal CAN interface, the generation of any desired CAN message under control of the serial device is the most favourable solution. In this case, a fixed, error detecting protocol is used at the serial interface. This protocol is open documented and implemented as default firmware. Filtering of incoming CAN messages is possible and configurable by the user.

Should there be a demand to change the serial protocol, an application development kit is available, which allows the implementation of custom specific firmware.

Technical Data

Layout and Connection

The connection to the CAN bus is achieved via pluggable terminals. Besides the CAN signals the clamps also carry the supply voltage for SerCAN-ARM7.

The terminals are connected according the following table:

Pin	Name	Function
1	+24V	Supply voltage
2, 3, 6-8	GND	Ground
4	CAN_H	CAN data line (dominant high)
5	CAN_L	CAN data line (dominant low)

The Sub-D 9 male plug is connected according the following table:

Pin	Name	Function
2	RxD	Receive data line
3	TxD	Transmit data line
5	GND	Ground
7	RTS	Request-to-Send control line
8	CTS	Clear-to-Send control line

Limiting Values

Parameter	Minimal	Maximal	Unit
Storage temperature	-20	+80	°C
Operating temperature	0	+60	°C
Supply voltage	-100	+30	V
Voltage on the CAN bus connections	-30	+30	V
Admissable power consumption (at 60°C)	n.s.	2000	mW

Any (also temporary) stress in excess of the limiting values may cause permanent damage on SerCAN-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 (running idle)	n.s.	30	n.s.	mA
Current consumption (250 kbaud, 100% bus load)	n.s.	40	n.s.	mA
Supply voltage	10	24	30	V

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