

CAN-CBM-Clock

Time Distribution for CAN-Bus

- serial interface for DCF77- or GPS (NMEA)-receiver
- integrated real time clock (RTC)
- one CAN interface
- transmission of timestamp in CANopen format
- compact top-hat rail module

Linking Time Emitter with CAN-Bus

The module CAN-CBM-Clock can link an external DCF77-clock signal receiver or an external GPS-receiver with the CAN bus. An additional internal real time clock (RTC) can take over the transmission of the timestamp, if no external signal is connected.

The module operates with a MB90F543 microcontroller, which buffers the CAN data in a local SRAM.

CAN Interface

The time information is transmitted as timestamp to the CAN bus. The ISO 11898-compliant CAN interface allows a maximum data-transfer rate of 1 Mbit/s.



The CAN interface is electrically isolated by optocouplers and DC/DC converters. It is connected via a 5-pin screw/plug connector in Combicon style.

Design

The module is designed for hat-rail mounting. The connectors and status LEDs are placed in the front panel.

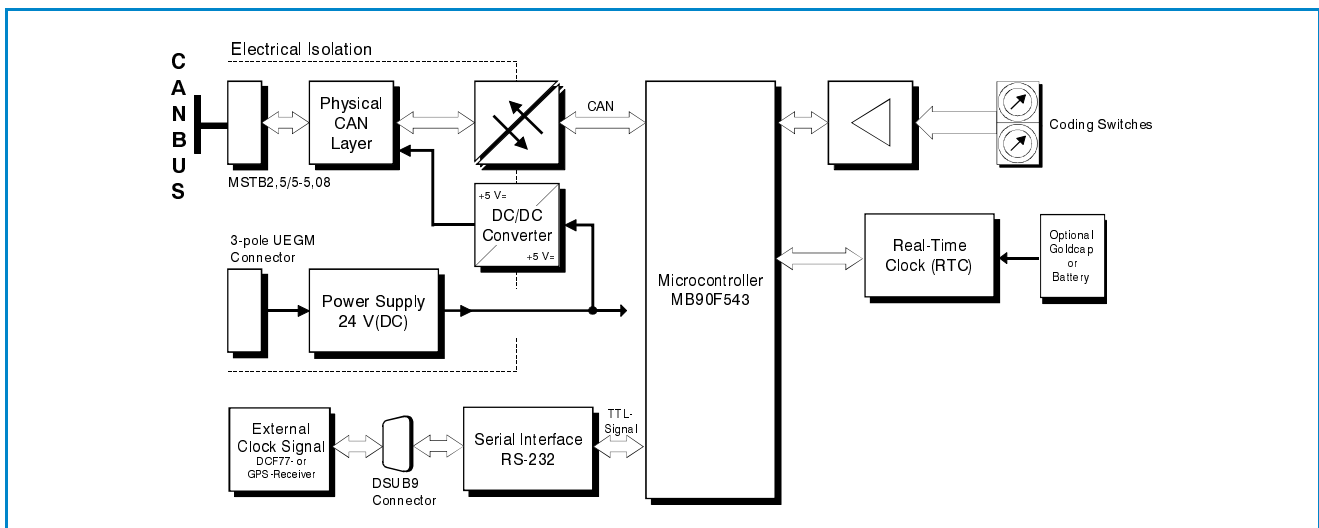
Serial Interface

The linkage of the CAN bus to an external DCF77- or GPS-receiver is done via a serial interface. The physical layer of the serial interface is realized as an RS-232 interface.

CAN Protocols

The CAN-CBM-Clock module works with the CANopen® Protocol according to CiA® specification CiA 301 and CiA 401.

(This product is not recommended for new design!)



Technical Specifications:

CPU and Serial Interface:

Microcontroller	MB90F543, 16 MHz
Memory	6 k x 8 bit SRAM, 128 k x 8 bit Flash EPROM
Serial controller	MB90F543-internal, 9600 kbit/s
Physical interface	RS-232
Clock signal	external: DCF77- or GPS-receiver, internal: additional RTC

CAN Bus Interface:

CAN controller	MB90F543-internal, ISO 11898-1
CAN interface	differential, electrically isolated, 1 Mbit/s, ISO 11898-2
Protocol	CANopen CiA 301, CiA 401

General:

Connectors	CAN: 1x 5-pin connection socket serial: 9-pin DSUB male, power: UEGM screw connector
Operating voltage	nominal 24 V DC
Operating current	40 mA @ 24 V
Ambient temperature	0 ... 50 °C
Dimensions	25 mm x 87 mm x 84 mm (width, height, depth)
Weight	ca. 120 g

Order Information:

Hardware	order no.
CAN-CBM-Clock-Cap	CAN-Clock module with GoldCap C.2836.02
CAN-CBM-Clock-Bat	CAN-Clock module with battery C.2836.03