

EPPC-405

Embedded PowerPC with CAN and ETHERNET



Hardware Manual

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Changes in the chapters

The changes in the document affect changes in the hardware as well as descriptions of facts only.

Chapter	Changes versus previous version
2.3	Pin assignment of power connector has changed!
-	

Technical details are subject to change without notice.

NOTE

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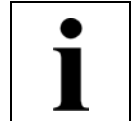
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1. Overview

1.1 Description of the EPPC-405-Computer

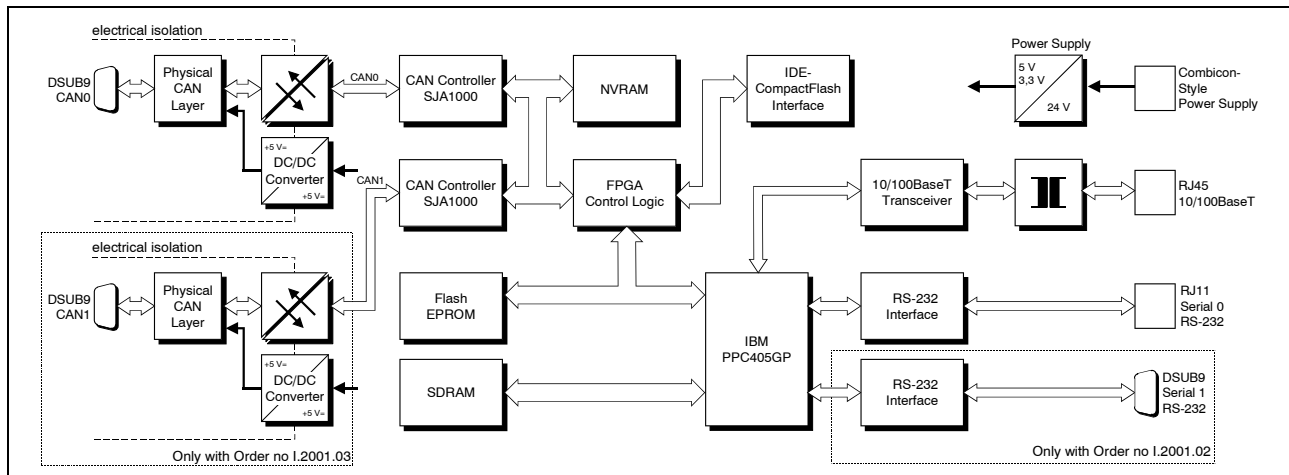


Fig. 1.1.1: Block-circuit diagram

The EPPC-405 is a compact PowerPC computer with various bus interfaces. It includes the PowerPC board CPCI-405 and a 24 V mains adaptor. Apart from the CompactPCI-bus connection all functions of the CPCI-405 board can also be used in the EPPC-405 computer. Therefore, the included CPCI-405 manual can also be used to operate this computer. The first part of this documentation explains the features of the EPPC-405 which are not covered by the CPCI-405 documentation.

Specific for the EPPC-405 are the following:

- installation of case
- power supply with 24 V
- a second CAN-interface at DSUB9-connector in front panel
- a second serial interface at DSUB9-connector in front panel



1.2 Front Panel View with Connector Assignment

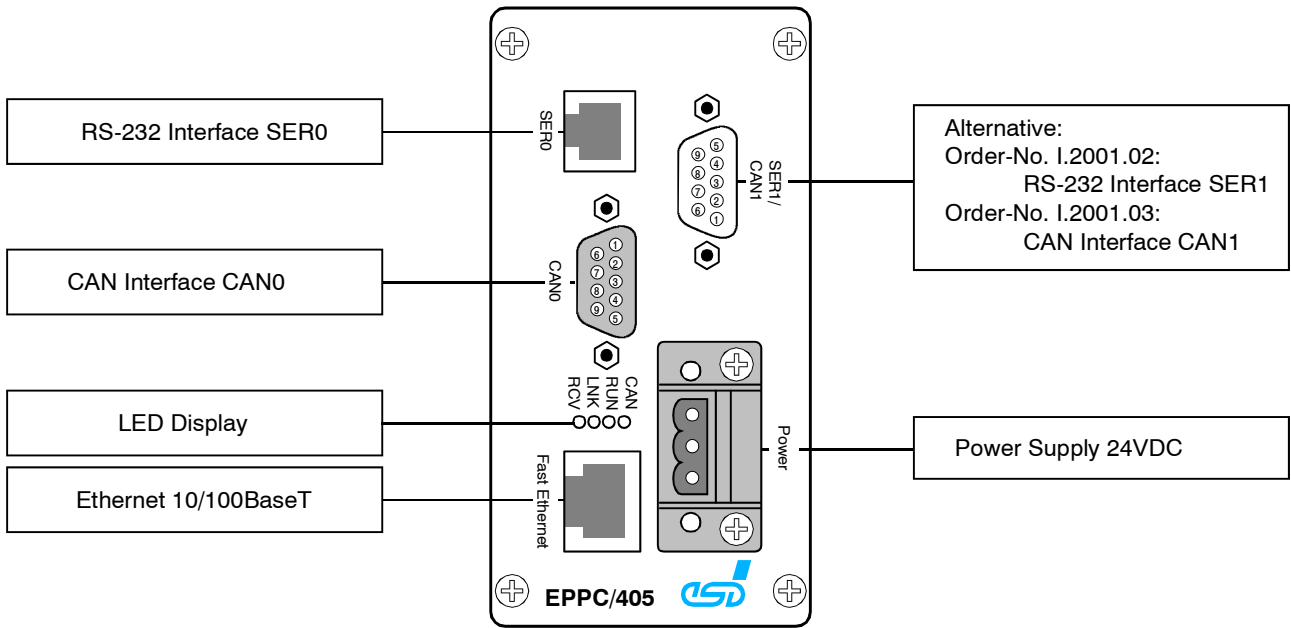


Fig. 1.2.1: Front panel view



1.3 Dimensions for Installation

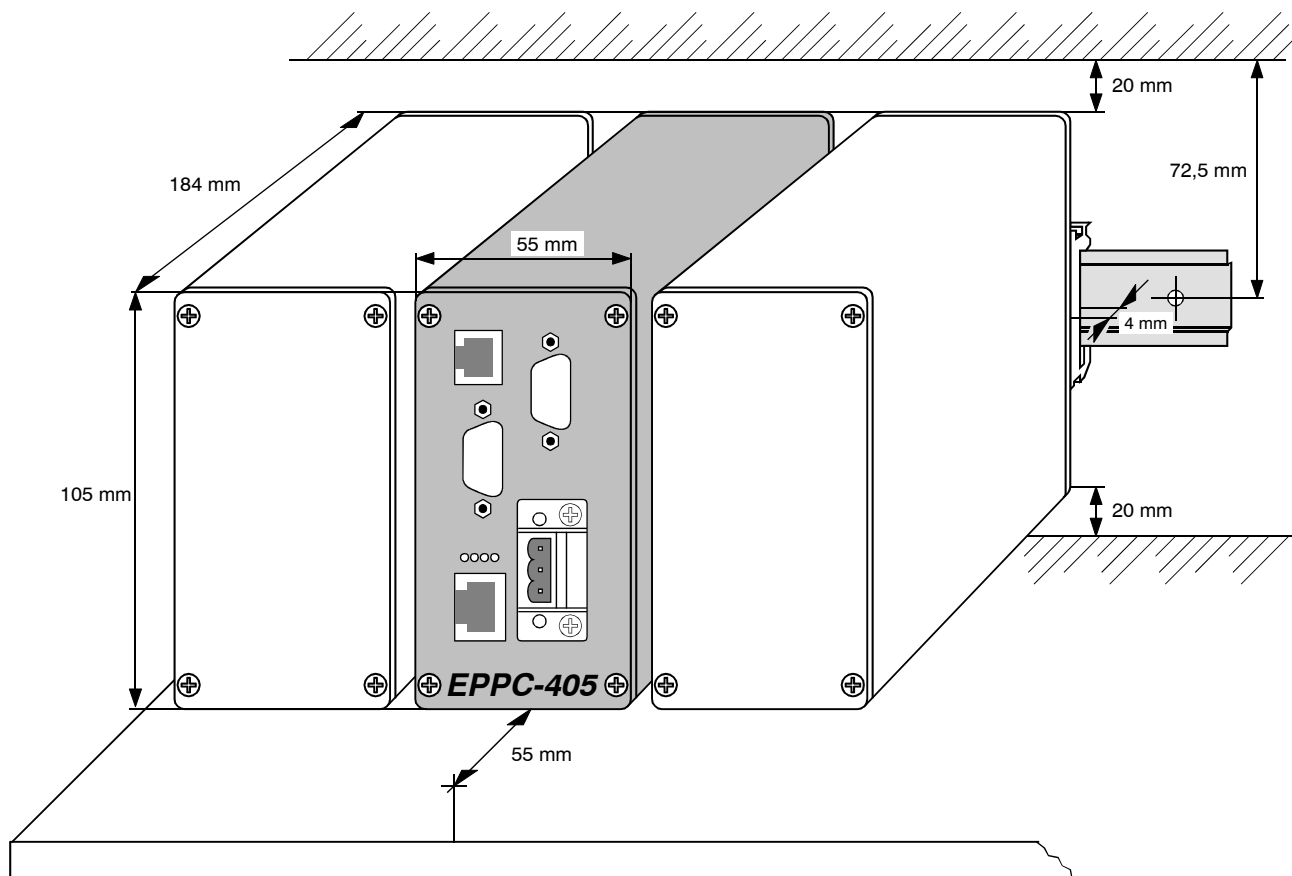


Fig. 1.3.1: Dimensions of the EPPC-405 for installation



1.4 Summary of Technical Data

1.4.1 General Technical Data

Ambient temperature	0...50°C
Humidity	max. 90 %, non-condensing
Connectors	SER0 (6-pin RJ11-female) - RS-232 interface (Serial 0)
	CAN0 (9-pin DSUB-male) - CAN 0 (ISO11898)
	Ethernet 10/100 (8-pin RJ45-female) - ETHERNET Twisted Pair (IEEE 802.3)
	Power (3-pin Combicon) - power supply 24 V
	SER1/ CAN1 EPPC-405-order no. I.2001.02: (9-pin DSUB-female) RS-232 interface (Serial 1) EPPC-405-order no. I.2001.03: (9-pin DSUB-female) CAN 1 (ISO11898)
Dimensions	105 x 55 x 200 mm (without connectors and hat-rail holder)
Weight	750 g

Table 1.4.1: General technical data

1.4.2 Power Supply

Input voltage	24 V / DC \pm 10 %
Power	7.2 W
Connector	3-pin screw/plug connector in Combicon design

Table 1.4.2: Power supply



1.4.3 Serial Interface 1 (only Order No. I.2001.02)

Drive	PPC405GP
Bit rate	micro controller: 1200 bit/s ... 312.500 kbit/s RS-232 transceiver: max. 38.4 kbit/s
Physical interface	RS-232C
Connector	9-pin DSUB-female in front panel

Table 1.4.3: Serial interface 1

1.4.4 CAN-Interface 1 (only Order No. I.2001.03)

CAN-controller	SJA1000
CAN-protocol	CAN 2.0A/2.0B
Physical interface	differential, connection in accordance with ISO 11898
Transmission rate	10 kbit/s ... 1 Mbit/s
Bus termination	has to be set externally
Connector	DSUB9-female in front panel

Table 1.4.4: CAN-interfaces

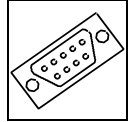


1.4.5 Order Information

Type	Features	Order No.
EPPC-405	IBM PPC405GP, 200 MHz, 16 MB SDRAM, 4 MB Flash, 2x RS-232, 1x CAN	I.2001.02
	IBM PPC405GP, 200 MHz, 16 MB SDRAM, 4 MB Flash, 1x RS-232, 2x CAN	I.2001.03
EPPC-405-ME *)	English manual	I.2001.21

*) If manual and product are ordered together, the manual is free of charge.

Table 1.4.5: Order information

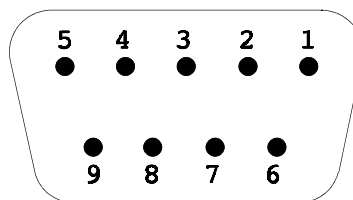


2. Connector Assignment

For the assignment of connectors for serial interface 0, CAN-interface 0 and the Ethernet interface please refer to the CPCI-405 manual. In this chapter only the connectors which are not on the CPCI-405 board.

2.1 Serial Interface 1 (SER1)

Pin Position:



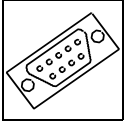
Pin Assignment:

Signal	Pin		Signal
n.c.	1	6	n.c.
RxD (output)	2	7	reserved
TxD (input)	3	8	reserved
reserved	4	9	n.c.
GND	5		

9-pin female DSUB

n.c. ... not connected

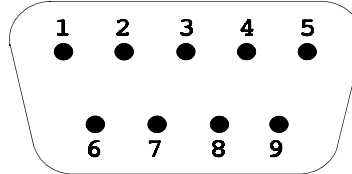
The signal names are stated as seen from the terminal (PC). The data direction given in brackets is as seen from the CPCI-405 board.



Connector Assignment

2.2 CAN-Bus Interface 1 (CAN 1)

Pin Position:



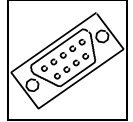
Pin Assignment:

Signal	Pin		Signal
CAN_GND	6	1	reserved
CAN_H		2	CAN_L
reserved	8	3	CAN_GND
reserved		4	reserved
	9	5	shield

9-pin female DSUB

Signal Description:

CAN_L, CAN_H ...	CAN-signal lines
CAN_GND ...	reference potential of the local CAN-physical layer
shield ...	potential of connector case
reserved ...	reserved for future applications



2.3 Power Supply

