

Trigentic AB

EmpirBus NXT MCU User manual

Covering models MCU-100, MCU-150, MCU-200, MCU-250,
Programming Interface and ICU

1. Introduction

The MCU is a product from the EmpirBus NXT product family. This document contains basic specifications and installation instructions. This and other documents are available at www.empirbus.com.

2. Scope of Delivery

The MCU Programming Interface is delivered with a 2m IP65 USB A to USB B mini cable. Other MCU:s are not shipped with a cable. MCU:s with integrated GSM are supplied with external GSM antenna.

3. Model Range

Both the unit and the box are marked with model number.

Model	MCU Programming Interface	MCU-100	MCU-150	MCU-200	MCU-250
USB PC interface	X	X	X	X	X
Master functionality		X	X	X	X
Integrated GSM				X	X
Extra CAN-port			X		X
RS232			X		X

Table 3.1: Model range

4. Installation

4.1 Mounting

The MCU should be mounted on a flat vertical surface with four screws (not included), with the orientation as shown in figure 4.1. **This product is not approved for engine room installation.**

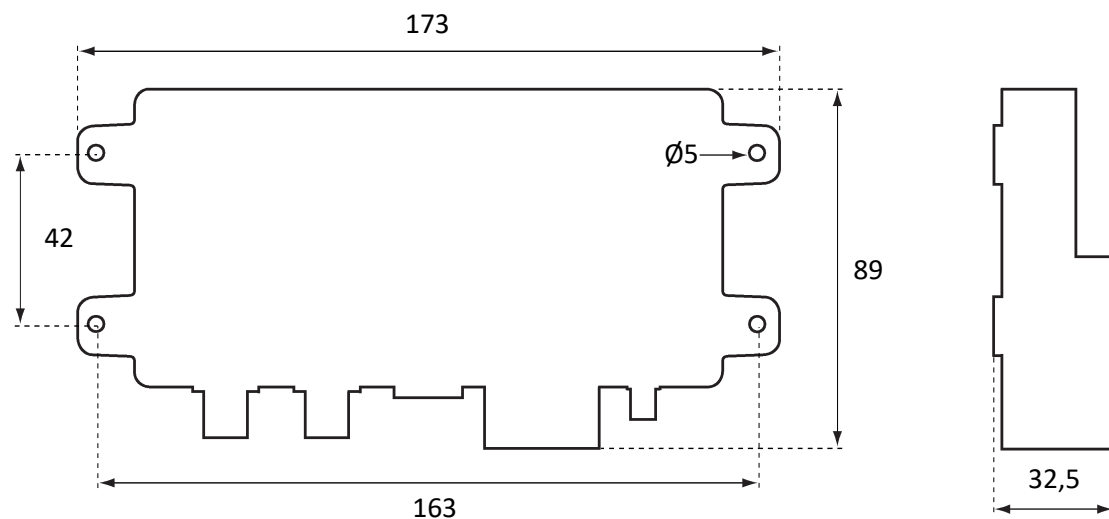


Figure 4.1: Dimensions

[mm] (Drawing is not to scale.)

4.2 Connectors

The bus connector is an NMEA 2000 compatible male Micro-C 5 pin connector. It is not recommended to connect a T-connector directly on to the unit, a drop cable should be between the main bus and the unit. The USB B mini connector is only designed to fit with an original MCU cable. The MCU-200 and MCU-250 are equipped with a female SMA connector for GSM antenna connection and a SIM card receptor that accepts mini-SIM. The SIM card is mounted behind the yellow cap. See figure 4.2.



Figure 4.2: MCU

5. Product specifications

See table 3.1 for model specification and hardware support

Communication <i>CAN-bus</i> <i>GSM</i>	NMEA 2000 Quad-band 850/900/1700/1800MHz
Power supply Max/average <i>Power consumption (power save)</i> <i>Supply voltage</i>	300mA/0,25mA 1.5mA 9-32VDC (Note: Power feed is through the NMEA 2000 bus)
Connectors <i>NMEA 2000</i> <i>Antenna</i> <i>SIM card</i> <i>USB slave interface</i> <i>CAN/RS232</i>	Micro 5pin M12 Male SMA female (MCU-200 & MCU-250) mini-SIM (15 x 25 mm) USB B mini Micro 12 pin M12 Male (MCU-150, MCU-250 & ICU)
Environment <i>Ambient temperature</i> <i>Enclosure</i>	-20 to +55 degrees Celsius Ingress Protection IP65, Polycarbonate ¹
Physical data <i>Size</i> <i>Weight</i>	173 x 89 x 32.5 mm 0.2 kg

¹ Exposure to solvents and/or water above 60°C may cause cracking on polycarbonate.

Notes:

[illegible]

Notes:

DECLARATION OF CONFORMITY

We, manufacturer, Garmin Sweden Technologies AB, Sweden, declare that the articles:
2051001, 2051011, 2051013, 2051061, 2051200, 010-02223-XX, 010-02224-XX

are in conformity with EC Directive EMC 2014/30/EU,
2051040, 2051043, 010-02223-40, 010-02223-43
are in conformity with EC Directive RED 2014/53/EU.



We also declare that the articles:
2051001, 2051011, 2051040, 2051013, 2051043, 2051061, 2051200,
010-02223-XX, 010-02224-XX

comply with
FCC 47 CFR Part 15, Subpart B, Class A.



SIGNS ON BEHALF OF	Trigentic AB
Name:	Henrik Niklasson
Position:	Product & Sales Manager
Location and date:	Uddevalla, Sweden, October 1 st 2019

Signature:

Henrik Niklasson

RoHS CERTIFICATE OF CONFORMANCE

We, manufacturer, Garmin Sweden Technologies AB, Sweden, declare that the articles:

2051001, 2051011, 2051040, 2051013, 2051043, 2051061, 2051200, 010-02223-XX, 010-02224-XX

are in compliance with Directive 2015/863/EU on the restriction of the use of certain hazardous substances in mechanics, electrical and electronic equipment (RoHS Directives).

SIGNS ON BEHALF OF

Trigentic AB

Name:

Henrik Niklasson

Position:

Product & Sales Manager

Location and date:

Uddevalla, Sweden, October 1st 2019

Signature:

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