

CYBOX IO CAN

Interface Module for CAN – Controller Area Network

- Uses MCP 2515 chip for interfacing
- SPI host interface
- ELTEC standard interface module format

PRELIMINARY

III Main Features

- CAN bus interface
- Uses MCP 2515 controller
- CAN V2.0B interface
- Local receive buffer memory
- Electrically isolated interfaces
- SPI host interface
- -40 to +70 (+85) °C operating temperature

III Description

The CyBox IO CAN module is an interface to the CAN bus. It contains the industry-standard CAN controller MCP 2515 from Microchip. The module includes two receive buffers controlled directly by the MCP 2515.

The CAN interface offers galvanic isolation up to 1500 VDC. And it has separate Sub-D interface connectors for daisy-chaining the bus on 9-pin male/female connectors.

The host interface is implemented as an SPI interface, which is fast enough for any CAN transaction.

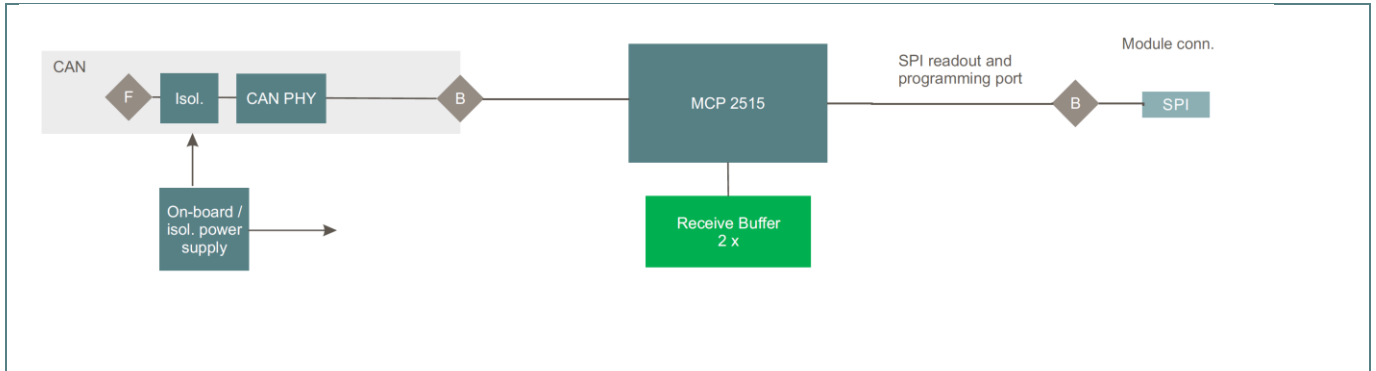
The module can be supported by a piece of software running under Linux and offering a path to scan CAN data in a scripting language in multiple parallel threads. Thus, the user can implement a Python script that is started automatically, scanning the CAN data stream for any combination of values. This makes it possible to record and later debug communications even with unknown devices. In “production applications” scripting can filter for preventive maintenance needs.

III ELTEC Modules

The form factor and the host interface are compliant to the ELTEC standard for mezzanine modules for vehicular interfaces. This means that other interfaces, such as MVB, are available in the same format – with more to come.

Connection to the base board is routed via a 30-pin board-board connector carrying SPI, serial signals, I2C and additional side-channel signals. Current implementations only use SPI and power supply lines.

III Block Diagram



III Technical Data

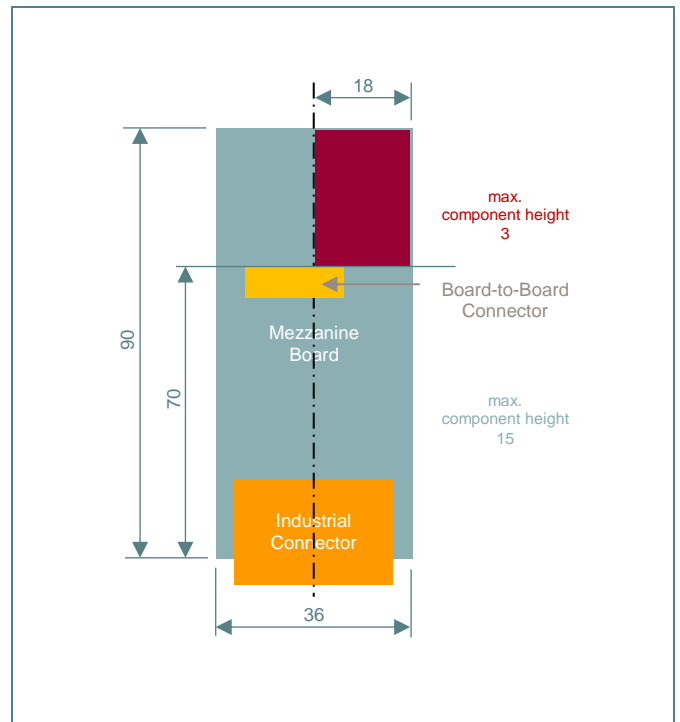
Physical Interfaces

CAN	Sub-D 9-pin male Sub-D 9-pin female Labeled « industrial connectors » below
SPI	On-Board connector ERNI SMC-Q-26-SMD-BA8-23 for SPI and power

Standards

→ EN 50155

Form factor



All dimensions in mm.

III Specification

Mechanical Specifications

Board dimensions: 90 mm x 36 mm

Weight: 50 g typ., 70 g max.

Electrical Specifications

5 VDC, 80 mA typ., 250 mA max.

3.3 VDC, 70 mA typ., 250 mA max.

Environmental Conditions

Temperature range (operation): -40...+70 (85 short term) °C

Temperature range (storage): -40...+85 °C

Relative humidity (operation): max. 95 % non-condensing

Relative humidity (storage): max. 95 % non-condensing

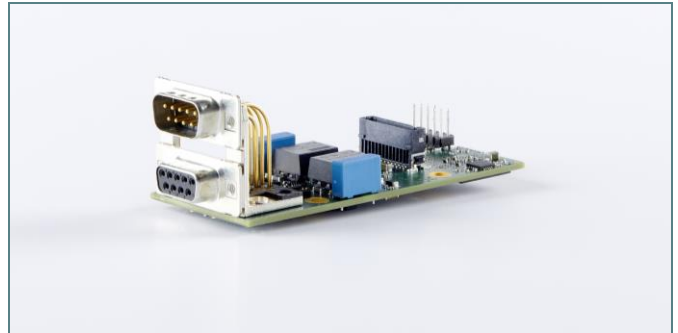
Altitude: -300 m to + 2,000 m

Climatic tests according to EN 60068

Shock and vibration tested according to EN 61373

Order numbers

→ CYMEZ-0100Bo with CAN interface



Picture may be subject to change

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