

Mini.Logger

Interface & Data Logging Module

Our multifunctional interface and data logging module features an onboard SDHC based data logger as well as 4 serial ports (2x RS232/ 422/ 485, 2 x RS232), USB (host and slave) and CAN2.0B interface. The optional available daughter board provides additional sensors often required in standard applications (such as 3-axis accelerometer/ inclinometer, 2 axis gyroscope, compass, pressure sensor). It includes 6 digital and 2 analogue inputs as well as 4 optically isolated and 4 high power output switches.

Helpful additional functions are a precision time base, a switchable power supply for external sensors and many more.

Furthermore it is possible to stack multiple modules (master/ slave configuration), if our customers' applications require any additional ports.

This module is primarily intended to be a flexible and powerful multiport data logging system controller solution in buoy based or ocean floor sensor systems. This system is feasible to be used as a standalone version one or a combination with any of our telemetry systems offered. Due to the extra low power consumption it is ideally suited to be used for long-term deployments.

Our flexible and extensive firmware allows economical and reliable customization. It enables our customers to handle applications now, which cannot be concluded by the current available standard firmware.

Product Specification

Standard Interfaces

- 2 high speed 64 byte FIFO serial ports (individually configurable to RS232/422/485) - up to 230kbps
- 1 low power, low speed serial port (with optional hardware handshake) - up to 9600bps
- 1 low power, low speed serial port (without handshake, RX/TX only)
- Switchable 8V/50mA sensor supply on serial port connectors
- High speed synchronous serial system bus (8 Mbps)

Optional Interfaces

- CAN 2.0B (max 1 Mbps) via MCP2515 CAN controller*)
- USB 2.0 - configurable as USB slave or USB host controller (Mass storage support) with configurable power from / to bus*)

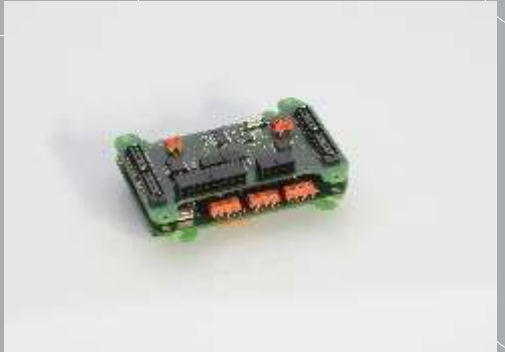
Digital & Analog I/O

- 6 digital inputs (not isolated)
- 2 analog inputs (unipolar 0-2.5V)
- 4 optically isolated switched outputs, max. 450mA, 40V
- 4 non isolated, protected switched outputs with common supply, max. 36V, 6A

Onboard Sensors

- High resolution (15bit/0.1hPa) pressure and temperature sensor 10-1100hPa, offboard mounting possible with 6 wire cable*)
- High precision (+-2% RH, +- 0.3°C) relative humidity and temperature sensor, offboard mounting possible with 4 wire cable*)
- 3-axis high resolution inclinometer/accelerometer, X,Y,Z +-2g, resolution 1mg (standard)
- 2-axis (XY) gyroscope (+-500°/s), resolution 0.4°/s*)
- Digital compass, 2.5° accuracy, 0.5° resolution*)

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Product Specification

Storage

- SDHC card slot, currently supporting up to 32 GB capacity cards with FAT32 file system
- 128kByte non volatile FRAM buffer memory

Time Base

- Standard 25ppm crystal oscillator time base for low power consumption
- Optional low power, algorithmically compensated time base (drift <0.035 ppm -5°C to 35°C after calibration (calibratable from GPS or external PPS time base - can be disabled via software)*)

Power Supply

- 4 to 33 V, reverse voltage protected
 - 3mW power consumption in standby mode
- *) Optional

INFORMATION

develogic GmbH
Eiffestr. 598
20537 Hamburg
Germany

PHONE: +49 (0)40 982625-13
FAX: +49 (0)40 982625-22
E-MAIL: info@develogic.de

www.develogic.de