

PCAN-MicroMod

Universal I/O Module with CAN Interface



Description

The plug-in module PCAN-MicroMod represents a straightforward possibility to provide electronic circuits with I/O functionality and a CAN connection. Configuring is done with a Windows® program which sends the configuration data to the module via CAN. Several modules can be configured independently on a CAN bus.

With various PCAN-MicroMod motherboards, it can be used in device and plant engineering and in the motor vehicle industry. An optional evaluation board simplifies the enhancement and development of custom boards.

Requirements:

The configuration requires a PEAK CAN interface.

Technical Specifications

- High-speed CAN connection (ISO 11898-2)
 - Bit rates from 10 kbit/s up to 1 Mbit/s
 - Compliant with CAN specifications 2.0A (11-bit ID) and 2.0B (29-bit ID)
- 8 analog inputs, measuring range unipolar 0 to 5 V, (resolution 10 bit, sample rate 1 kHz)
- 8 digital inputs and 8 digital outputs
- PWM/frequency outputs (1 Hz to 10 kHz)
- Maximum of 32 MicroMods in one CAN network
- Dimensions: 32 x 35 mm
- Extended operating temperature range from -40 to 85 °C (-40 to 185 °F)

PCAN-Ethernet Gateway DR

CAN to LAN Gateway in DIN Rail Plastic Casing



Description

The PCAN-Ethernet Gateway DR allows the connection of different CAN busses over IP networks. CAN frames are wrapped in TCP or UDP message packets and then forwarded via the IP network from one device to another. The PCAN-Ethernet Gateway DR provides one LAN connection and two High-speed CAN interfaces. With its DIN rail casing and the support of the extended temperature range, the module is suitable for use in an industrial environment.

The PCAN-Gateway product family is configured via a convenient web interface. Alternatively, the JSON interface allows access via software. Both options provide status information and settings of the devices, the various communication interfaces, message forwarding, and filters.

Technical Specifications

- ARM9 Freescale iMX257 with 16 kByte Level 1 Cache and 128 kByte internal SRAM
- 256 MByte NAND Flash and 64 MByte DDR2 RAM
- Linux operating system (version 2.6.31)
- RS-232 connector for serial data transfer (reserved for future use)
- Connections for CAN, RS-232, and power supply via 4-pole screw-terminal strips (Phoenix)
- Monitoring and configuration of the devices via the web interface or JSON interface
- Reboot and reset of the device to factory defaults with a reset button
- Plastic casing (width: 22.5 mm) for mounting on a DIN rail (DIN EN 60715 TH35)
- LEDs for device status and power supply
- Voltage supply from 8 to 30 V
- Extended operating temperature range from -40 to 85 °C (-40 to 185 °F)

LAN properties

- Data transmission using TCP or UDP
- 10/100 Mbit/s bit rate
- RJ-45 connector with status LEDs

CAN properties

- Two High-speed CAN channels (ISO 11898-2)
- Bit rates from 5 kbit/s up to 1 Mbit/s
- NXP PCA82C251 CAN transceiver
- Galvanic isolation of the CAN channels up to 500 V against each other, against RS-232 and the power supply
- Compliant with CAN specifications 2.0A and 2.0B

PCAN-Router Pro

4-Channel CAN Router with Data Logger



Description

The PCAN-Router Pro allows to join the data traffic from four High-speed CAN busses. The behavior of the router is configured via the CAN bus with the provided Windows program PPCAN-Editor. As well as pure forwarding, the CAN data can be processed, manipulated, and for example, filtered in a number of different ways. There are a variety of function blocks and other settings available to the user for configuration setup. Furthermore, there is a virtual fifth CAN channel which is used for recording all data traffic to a CompactFlash card.

As an alternative to the standard firmware which the PCAN-Router Pro is equipped with at delivery, custom firmware based on the ARM microcontroller NXP LPC2294 can be created and implemented. The scope of supply includes a library and the Yagarto GNU ARM toolchain (contains the GNU Compiler Collection GCC for C and C++).

CAN transceiver modules in the PCAN-Router Pro allow a flexible adaptation of each CAN channel to the requirements. For example, Low-speed and Single-wire CAN transceivers are also available on request.

Requirements:

The configuration or the transfer of the firmware via CAN requires a PEAK CAN interface.

Note about the programmability:

Since March 2013, a toolchain and a library are available for programming custom firmware for the PCAN-Router Pro. Please note that due to various hardware extensions only devices with a serial number from 100 can be equipped with custom firmware.

Technical Specifications

- 4 High-speed CAN channels via plugable transceiver modules. Alternatively, Low-speed, Single-wire, and opto-decoupled High-speed modules, as well as High-speed modules without wake-up function available
- Wake-up function using separate input or CAN bus
- Complies with CAN specifications 2.0 A/B
- CAN connections are D-Sub, 9-pin
- CAN termination switchable, separately for each CAN channel
- CompactFlash card slot
- Battery-buffered real-time clock (RTC), can also be used for wake-up
- Beeper
- Status LEDs for CAN channels, CompactFlash card, microcontroller, and power supply
- NXP microcontroller LPC2294
- Aluminum casing with flange. DIN rail fixing option available on request
- 8 - 27 V power supply, protection against overvoltage and reverse polarity
- Extended operating temperature range from -40 to 85 °C (-40 to 185 °F)

Properties of the standard firmware:

- Detailed configuration with the software PPCAN-Editor 2 for Windows®
- Various function blocks for data processing and manipulation
- Configurable beeper
- Configurable CAN channel status LEDs
- Recording of CAN data and error frames to a CompactFlash card
- Conversion of logging data to various output formats using Windows® software