

CAN-Ethernet

CAN-ETHERNET GATEWAY

More Information

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Technical Information
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Order Number 3004010
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Multi-level CAN networking made easy

The CAN-Ethernet Gateway enables the integration of CAN buses to existing Ethernet topology. Hence, it is suitable as universal PC CAN interface and for coupling of CAN networks via Ethernet. CAN messages are directly transferred on layer 2 level - independently from protocol. This allows for applying the CAN-Ethernet Gateway to high-layer protocols such as CANopen, DeviceNet or SDS. The access via Ethernet is possible over TCP as well as UDP.

The CAN-Ethernet Gateway is based on a high-performance ARM9 controller which provides for a high data throughput even if several CAN interfaces are simultaneously active. Using Linux as operating system enables the user to execute own programs in parallel to the Gateway application. In targeted answer to certain events, sophisticated filter and trigger mechanisms allow for directly

calling user tasks on the Gateway.

Filters are easily configurable and ensure reasonable limitation of CAN messages to be transferred. Each CAN message is allocated a time stamp that assures time transparency for the message transfer. The Gateway is able to administer several Ethernet connections simultaneously. Thus, it is possible to create complex net structures. The device configuration optionally takes place via Ethernet or via USB.

Gateway mode

The Gateway mode makes possible the device application as universal CAN / Ethernet coupler. Thereby, the Gateway is typically used at a PC as external CAN interface. Hence, it enables easy and flexible access to CAN systems via LAN or Internet. The scope of delivery includes drivers that facilitate using the CAN-Ethernet Gateway as PC interface for all

CAN and CANopen software tools sold by SYS TEC. The driver API is documented in detail and supports the integration of the Gateway into own user applications. A simple ASCII protocol enables trouble-free connection of the Gateway to different Host systems. From the Host application, the message transfer with the CAN network takes place via socket-based TCP or UDP communication.

Bridge mode

The Bridge mode allows for transparent coupling of CAN networks via LAN or Internet. By filtering messages, on the one hand it is possible to limit the data volume to be transferred, and on the other hand it is possible to systematically control the data exchange between sub-nets. For example, for the coupling of CANopen networks it is feasible to only exchange PDOs and to exclude all other message types from being transferred.

Highlights

- PC driver with programmer API (binary or ASCII mode)
- Simultaneously supports multiple connections, mixed client/server mode possible
- Configurable filters for transmission of CAN messages, sample configuration files on CD
- Active transmission of CAN error messages with configurable CAN identifier

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Technical Data:

CAN Interface

- Channels: 1 or 2
- Controller: SJA1000
- Transceiver: high-speed
- Optical isolation
- Interface according to ISO 11898 1/2
- Mixed 11/29-bit identifiers
- Remote frames
- Listen-only mode
- Error message with configurable identifier
- Time stamp for received messages
- Transfer rate: 10kbps to 1Mbps
- Connector: 2x 5-pin spring type connector with optional D-SUB-9 adapter cable
- CAN-bus termination switch

Ethernet Interface

- Connector: RJ45
- Transfer rate: 10/100Mbps

Power Supply

- 24VDC +20% -60%
- Current consumption: typ. 100mA

Housing

- Suitable for DIN/EN rail assembly
- Dimensions: 70 x 100 x 61
(L x W x H; in mm)

Operating Conditions

- Working temperature: 0°C to +70°C, -20°C to +85°C (optional)
- Storage temperature: -20 to +90°C
- Humidity: 80% rel. (non-condensing)

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