

## DOS-Drive CAN

- ❑ PC Card storage device for embedded systems and micro controller applications
- ❑ Two separate interfaces
  - High-Speed CAN-Bus
  - Asynchronous serial interface
- ❑ Robust ATA Flash Card as removable data storage
- ❑ DOS FAT file system (MS-DOS 6.x) for easy data exchange with Notebooks and Desktop PC's
- ❑ Functions to create, read, write, organize and format files and directories
- ❑ Extended temperature range (-40°C to +85°C)



### Applications

ATA Flash Card gain increasing importance as an universal, flexible and reliable media for data exchange between devices and computers.

With the *DOS-Drive CAN* a completely new read/write device is available, which reduces development time and makes ATA Flash Cards available for a wide variety of systems:

- ☞ **Automotive**
- ☞ **Precision farming, construction equipment**
- ☞ **Automation**

**DOS-Drive CAN** organises files and folders in **DOS format**. Therefore it is easy to maintain machine data and prescriptions under **Windows** operating systems.

### Robust storage media

For data storage, the **ATA Flash Cards** from **SanDisk** are used, which are well known for their reliability and robustness. At present, capacities between 16 MB and 2 GB are available.

### Flexible Host Interface

*DOS-Drive CAN* offers two separate interfaces which can be used alternatively:

- ☞ **High-Speed CAN-Bus**
- ☞ **RS232-Interface**

The configuration of the device is done with a PC program which utilizes the RS232-interface.

### CAN-Bus connection

*DOS-Drive CAN* supports **CAN 2.0B (active)**. On default the **High-Speed CAN-Bus** (ISO 11898) is used. Two identifiers are required for communication. The following **CAN-Bus Parameters** can be configured via the serial interface:

- Bit rate (up to 1MBit/sec)
- Standard (11 Bit) or Extended (29 Bit) CAN
- Identifiers for communication

These parameters can be adjusted to the requirements of specific target systems by the help of a utility program from the **DOS-Drive CAN SDK** (software development kit). They remain in non-volatile memory until the next change.

### **RS232-connection**

Alternatively, the **DOS-Drive CAN** can be connected to the host system via the serial interface. The serial connection uses no separate control lines.

The DOS-Drive CAN **automatically** detects the **baud rate** being used by the host system. Transmission rates up to 115.200 Baud are possible.

### **Fully developed communication protocol**

For communication between the host system and the DOS-Drive CAN, a **simple and secure protocol** is used, which is implemented for CAN- and RS232 interface. The protocol allows to access functions of the DOS FAT file system in a comfortable way.

Therefore, the DOS-Drive CAN is highly independent from the architecture of the host system and requires only a **minimum of resources**.

Special measurements have been taken to ensure a high level of data integrity even with **intermittent disconnections in power supply**. In such a case the device will be able to complete an interrupted transaction on the next power-up. All files that have been left open will be closed.

### **DOS-File Functions**

**DOS-Drive CAN** supports a wide variety of DOS file functions:

- ☞ **File system fully compatible to MS-DOS 6.x**  
*Supports 12/16-bit FAT*  
*8.3 - file name convention*  
*Allows up to 16 simultaneously opened files*
- ☞ **Extensive set of file functions**  
*Create, Open, Close,*  
*Read, Write, Seek,*  
*Rename, Delete,*  
*Read/Write file attributes and time*
- ☞ **Supports subdirectories**  
*Change, Create, Delete, Display*
- ☞ **Formatting PC Cards**  
*in MS-DOS compatible Format*

### **Special functions**

DOS-Drive CAN offers the following special functions, which are accessible with protocol functions:

- ☞ **Request status information**  
*PC Card inserted/changed,*  
*Information about PC Card (typ, size, format)*
- ☞ **Sector level access**  
*Format independent access to all sectors of the media (read and write)*

### **Support for Design-In**

Usually, the DOS-Drive CAN will be integrated as an OEM component in specific target systems. Therefore, the standard shipping contents is reduced to the essential.

The integration into a target system is a one-time process. Therefore, the documentation and application samples are offered as a separate product **DOS-Drive CAN SDK (Software Development Kit)**, which has to be purchased only once:

- ☞ **Complete device description**
- ☞ **Extensive documentation of the communications protocol.**

Additionally some tools are provided for the integration of the serial communication:

- ☞ **PC based terminal program**
- ☞ **Shell with test functions similar to the DOS COMMANDS:**  
*FORMAT, DIR, COPY, TYPE, DEL, REN*  
*CD, MD, RD and others.*

## Specification DOS-Drive CAN

Item	DOS-Drive CAN <sup>1)</sup>
<b>Dimensions Weight</b>	109 x 35 x 176 mm ~ 400g
<b>Power supply</b>	<b>8 to 32 V DC</b> via 3-pin low voltage connector <sup>2)</sup>
<b>Power consumption</b>	(Power Control OFF) ~ 2mA by 12V ~ 1300 mW (with ATA Flash Card, no access) ~ 1600 mW (with ATA Flash Card, access)
<b>CAN Interface <sup>3)</sup></b>	<b>CAN 2.0B (activ)</b> High-Speed CAN (ISO11898) max. 1MBit/s (500k, 250k, 125k, 83.3k, 62.5k, ...)
<b>Connector</b>	D-SUB 9-pol plug
<b>RS232 Interface</b>	8 data bits, 1 Stopbit, Parity Baudrate wird automatisch erkannt <b>max. 115200 Baud</b> (115.2k, 57.6k, 38.4k, 19.2k, 9.6kBaud)
<b>Connector</b>	D-SUB 9-pol socket
<b>PC Card Slot</b>	One slot for <b>PC Card Type II</b> at front
<b>PC Card Types</b>	ATA Flash Card SanDisk CompactFlash Card SanDisk (with Adapter)
<b>LEDs</b>	4 LEDs: POWER (green) / BUSY (red) / STATUS (green) / ACTIVE (rot)
<b>Environment</b>	<b>-40°C to +85°C</b> (operation and storage) humidity max. 90% (non-condensing)
<b>Conformity</b>	<b>CE</b>

<sup>1)</sup> please ask for: different formats, for example 3½“, 19“ or only PCB

<sup>2)</sup> please ask for: power supply alternative 5V DC, for supply over adapter or over PC with keyboardadapter

<sup>3)</sup> please ask for: other bit rates like the Low-Speed CAN-Bus (ISO11519)

### Delivered with:

- **DOS-Drive CAN**  
table top unit with installation tips
- **Power supply cable**  
(End open)

### Other products:

- **DOS-Drive CAN SDK**  
**Diskette** (3 ½") with **Tools and Documentation**  
(in english)
- **OmniDrive**  
Universal PC Card drive for  
PC-printerport (SPP und EPP) and USB