# Ixxat®
**BY HMS NETWORKS**

# USB-to-CAN/FD Standard Card

The Ixxat USB-to-CAN/FD Standard Card with galvanic isolationoffers a straightforward and economical solution for connecting a computer to a CAN/CAN FD bus network. This card version is installed via slot board and internal USB-C cable to a PC. It is a very reliable tool for CAN applications e.g. in the field of test, development, maintenance or control applications.

Galvanic isolation reliably enhances the protection of the device against damage to electronics caused by voltage peaks.

## FEATURES AND BENEFITS

- Combines CAN and CAN FD in one device
- Cost-effective and extremely versatile
- High-precision time-stamp accuracy
- High data throughput combined with low latency
- USB 2.0 hi-speed (480 Mbit/s), compatible with USB 3.x
- Galvanic isolation
- CAN FD connection up to 8000 kbit/s via D-Sub 9 connector
- Common driver interface for easy exchange of the PC interface type
- Powerful programming interface for Windows (VCI) as well as for Linux (SocketCAN or ECI), QNX and VxWorks (ECI)

| ORDER NUMBER | 1.01.0382.12001 |
|---|---|
| CAN/CAN FD channels | 1 |
| CAN high-speed interface | 1x D-Sub 9, CiA standard pinning according to CiA 303-1 |
| CAN high-speed bit rates | 10 kbit/s to 1000 kbit/s |
| CAN FD bit rates | up to 1000 kbit/s arbitration rate with up to 8000 kbit/s data rate |
| CAN bus termination resistors | - |
| CAN controller | ISO 11898-2:2015 CAN and CAN FD |
| CAN high-speed transceiver | TCAN1044 or compatible |
| Galvanic isolation | 1 kV DC for 1 min. |
| USB interface | USB 2.0 hi-speed (480 Mbit/s), compatible with USB 3.x |
| USB connector | Internal USB cable (type C) to 5-pin female connector |
| Microcontroller | 32 bit, ARM, 160 MHz |
| Power supply | +5 V DC/300 mA (via USB port) |

| ORDER NUMBER | 1.01.0382.12001 |
|---|---|
| Dimensions | 67.5 x 40 x 13.6 mm |
| Weight | 30 g |
| Operating temperature | -40 °C to +85 °C |
| Storage temperature | -40 °C to +85 °C |
| Relative humidity | 10 to 95 %, non-condensing |
| Certification | CE, FCC |
| Operating systems | Windows 11, Windows 10 (32/64), Linux, QNX and VxWorks |

## CERTIFICATES



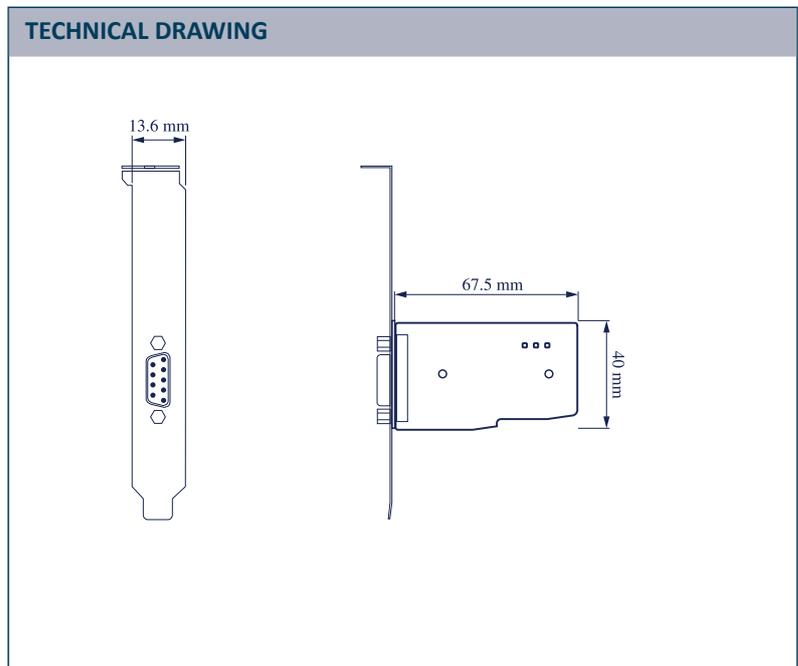| ACCESSORIES | ORDER NUMBER |
|---|---|
| Termination adapter for CAN/CAN FD (D-Sub plug to socket) | 1.04.0075.03000 |
| CAN cable 2.0 m (D-Sub plug to socket) | 1.04.0076.00180 |
| CAN Y cable 0.22 m | 1.04.0076.00001 |
| CAN Y cable 2.1 m | 1.04.0076.00002 |

## PIN ALLOCATION

USB 5 Pin Female Connector

| Pin | | Signal |
|---|---|---|
| 1 | Red | +5 V/voltage +/VCC |
| 2 | White | D-/data-/USB- |
| 3 | Green | D+/data+/USB+ |
| 4 | Black | GND/voltage-/ground |
| 5 | Black | GND |

CAN Connector

| Pin | Signal |
|---|---|
| 7 | CAN high |
| 2 | CAN low |
| 3 | CAN GND |

## TECHNICAL DRAWING



13.6 mm

67.5 mm

40 mm

## SOFTWARE SUPPORT

### Drivers and programming interfaces

Comprehensive and powerful driver and software packages for the USB-to-CAN/FD series are available for free at hms-networks.com/support/general-downloads. The driver packages can be downloaded for Windows (VCI - Virtual Communication Interface) and Linux (ECI), and are available on request for various real-time operating systems (INtime, RTX, Vxworks, QNX).

Using the Ixxat driver packages, customers can easily switch between the different Ixxat PC interfaces offered by HMS Networks. This would allow them to use USB, PCIe, Ethernet or other PC connections without changes to their application. The drivers support all protocols available on the interface with one API, so customers can easily access CAN, CAN-FD and LIN simultaneously and get the data with a common time stamp.

### Softwaretools

The software tool canAnalyser3 Mini is included in the VCI V4 download package and enables the first analysis steps and monitoring in CAN networks. Further information about the tools as well as Demo/Trial versions are available on the Ixxat webpage.

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