# Welcome to Kvaser Device Guide

This help file describes the functionality of Kvaser Device Guide.



# The Main Menu

The main menu at the top of the program lets you access the following:

#### File

Contains standard command to exit Device Guide.

#### View

Manage the visibility of various parts of Device Guide.

- Bus Parameters Display Bus Parameters of a channel in the Details List
- Detailed Information Display additional, detailed, information in the Details List
- Synchronized Hardware Displays synchronized hardware in the Device Tree
- *Driver Diagnostics* Opens a dialog, displaying messages from connected devices.

# Tools

The Tools menu allows you to start various other tools to setup, troubleshoot, and/or maintain your Kvaser Device.

• Remote Device Configuration

Utility tool to setup configuration for a Kvaser Remote Device.

- *Network Device Selector* Tool to list available Kvaser Remote Devices on the network. You can search for, add, and select devices to use.
- Memorator Tools

Utility tool to create your own configurations for Kvaser Memorator, Kvaser Memorator Light, Kvaser Memorator SemiPro, and Kvaser Memorator Professional.

- *Memorator Config Tool* Utility tool to create configurations for Kvaser Memorator (2nd generation) devices.
- *Customer Data* Utility tool to handle customer data.

#### Help

In addition to this help, this menu gives you access to the **About** window where you will find the version number of Device Guide and CANlib, and a link to the Kvaser website, if you should need to contact support.

#### **Related topics**

Details List Device Tree Driver Diagnostics Settings Dialog Synchronization Hardware

## The Device Tree

#### Hardware

This view shows all connected devices, connected via usb or remotely, and their respective channels. You can access several actions through the context menu, such as locating a specific device.

#### Locating a device

Right-click on a device and select **Locate Hardware (Flash LEDs)**. This will cause the device to flash its LEDs for a couple of seconds.

# Configure a device

Devices with editable configurations, memorators and remote devices, can be opened with their respective configuration tool. Right click on a device or channel and choose **Configure Remote** or **Configure Memorator**. Configure Remote will launch **Kvaser Remote Device Configuration**. Configure Memorator will either launch **Kvaser Memorator Config Tool** or **Kvaser Memorator Tools**, depending on what type of memorator is to be configured. Clicking on **Pair via Wi-Fi** will launch the **Kvaser Wi-Fi Pairing Tool** where one can pair a wireless Kvaser device with a PC in a simple manner.

#### **Hardware Problems**

If there is a yellow exclamation mark in the device icon (see below) the device is not working properly. This can happen for a number of reasons. By clicking the device a description of the problem will appear to the right. Another place to look what went wrong might be on the Diagnostics section.



#### Synchronized Hardware

You can also choose to see synchronized hardware: devices whith clocks synchronized with magisync. To see synchrnized hardware, use **View | Synchronization Hardware**, or via the context menu.

			<u> </u>
Serial Number	Canlib Channel	Device Name	dware
505	0	Kvaser USBcan Pro 2xHS v2	Kvaser USBcan Pro 2xHS v2
505	1	Kvaser USBcan Pro 2xHS v2	Channel 1
1024	2	Kvaser Eagle	Channel 2
1024	3	Kvaser Eagle	Rvdser Edgle
1111	4	Kvaser BlackBird v2	B Channel 2
0	5	Kvaser Virtual CAN Driver	Kvaser BlackBird v2
0	6	Kvaser Virtual CAN Driver	월 Channel 1
 		-	Kvaser Virtual CAN Driver
	Value	Item	Kvaser MagiSvnc Group 1
6665555	******	22222222222222	- 23282323232323233233
2222	<u> </u>		3

### **Related topics**

Main Menu Channel List Detail List Settings Dialog Synchronization Hardware

# Synchronization Hardware

This section provides information about the synchronization of the hardware.

## Kvaser MagiSync™

The patented Kvaser MagiSync technology provides synchronization between devices supporting Kvaser MagiSync. The synchronized hardware will share the same clock. For this to work the devices will have to be in the same Kvaser MagiSync Group (that is, they must be connected to the same USB *root hub*). If they are not they will not be synchronized. The tree view to the left will show which Kvaser MagiSync Group the devices belong to.

An easy way to locate the hardware in a Kvaser MagiSync Group is to right click on a group and select **Locate Hardware**. This will cause the devices in a group to flash their LEDs for a couple of seconds. To locate a single device, click on the device and select **Locate Hardware**.

**Note**: in Windows 98, the detection of the different MagiSync groups does not work due to a limitation in Windows 98. The detection does work in Windows 98 Second Edition.

#### Kvaser MagiSync Info

By clicking a device in the tree view some device information will be displayed to the right.

• **USB Speed** shows whether the device is running in USB Full Speed (12 Mbit/s) or USB HiSpeed (480 Mbit/s).

- **USB Controller Id** displays a hexadecimal number which is the "signature" of the USB root hub. All devices in a Kvaser MagiSync group must be connected to the same root hub.
- **MagiSync** is "Running" if Kvaser MagiSync is running on the selected channel.
- Max Deviation, Min Deviation and Current Deviation displays some measurement statistics about Kvaser MagiSync.

<u>V</u> iew <u>T</u> ools <u>H</u> elp				
💑 Hardware	Devices in MagiSync Group 1	Card Number	Serial Number	
Kvaser Usbcan Pro 2xHS V2       Sign Channel 1       Kvaser Eagle       Sign Channel 1       Sign Channel 2	USBcan Pro 2xHS v2	4	505	
A	Item	Value		
🔺 🌏 Kvaser Virtual CAN Driver	USB Speed	Hi-Speed (480	Mbit/s)	
Channel 1	+ USB Controller ID	0xF368FE82		
Channel 2	MagiSync	Running		
Synchronized Hardware	Max Max Deviation	0 ns		
<ul> <li>Kvaser MagiSync Group 1</li> </ul>	Min Min Deviation	0 ns		
KVaser USBcan Pro 2XHS V2	Current Deviation	0 ns		
WASER	888888888		888 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	

# Help

In addition to this help, this menu gives you access to the **About** window where you will find the version number of Device Guide and CANlib, and a link to the Kvaser website, if you should need to contact support.

# **Related topics**

Details List Device Tree Driver Diagnostics Settings Dialog

# The Channel List

This view lists channels of devices and some information about them. Which channels are listed depends on what is selected in the Device Tree: When the Hardware node is selected in the tree, all devices channels are listed. When a device is selected, all channels of the selected device is listed.

ile <u>V</u> iew <u>T</u> ools <u>H</u> elp				
A 📲 Hardware	Device Name	Canlib Channel	Serial Number	
<ul> <li>Kvaser USBcan Pro 2xHS v2</li> <li>Channel 1</li> <li>Channel 2</li> <li>Kvaser Eagle</li> <li>Channel 1</li> <li>Channel 2</li> <li>Channel 2</li> <li>Kvaser BlackBird v2</li> <li>Channel 1</li> </ul>	ब्रह्म Kvaser Eagle ब्रह्म Kvaser Eagle	2 3	1024 1024	
· · · · · · · · · · · · · · · · · · ·	Item	Value		
Synchronized Hardware	General Information			
Kvaser MagiSync Group 1	Device Name	Kvaser Fagle		
Kvaser USBcan Pro 2xHS v2	Vaser USBcan Pro 2xHS v2 Device value valu			
	Device FAN	73-30130-00567-9		
	Serial Number	1024		
	Firmware Version	3.5.0.905		
	Detailed Information			
	Card Number	5		
	Hardware Type	57		
	Manufacturing Date	1 januari 1970		
	PCB Revision	615 - not progr	ammed	
	DLL File Version	8 18 664 0		
	DIL Product Version	5, 18, 0, 0		
	Driver File Version	8, 18, 664, 0		
	Driver Product Version	5,18.0.0		
KVASER.	87555555	88888	02020202020	
			-17-12-FO-K2-K2-FO-F	
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#### Related topics Main Menu Device Tree

# The Detail List

This view lists information about the currently selected device or channel. You can alter what type of information should be visible, either through **View** in the main menu, or through the context menu, which you access by right clicking in the view.

Information category	Description
General Information	Basic information about the selected device, such as its name, EAN, and firmware version.
Bus Parameters	The currently set bus parameters of the selected channel, if the channel is bus on. To see bus parameters: <b>View   Bus Parameters</b> , or via the context menu click <b>View Bus Parameters</b> . For more information on bus parameters and bit timing, please visit www.kvaser.com/about- can/the-can-protocol/can-bit-timing/, or www.kvaser.com/support/calculators/bit-timing- calculator/
Detailed Information	Additional, more detailed, information about the selected device, such as hardware type, manufacturing date, and driver name. To see detailed information: <b>View   Detailed</b> <b>Information</b> , or via the context menu click <b>View</b> <b>Detailed Information</b>

When a node under Synchronized Hardware is selected, information relating to device synchronization will be listed instead. To view synchronized hardware, see Device Tree



#### **Related topics**

Main Menu Channel List Device Tree Synchronization Hardware

# **The Driver Diagnostics**

The Driver Diagnostics dialog displays a list of messages from different Kvaser devices. For example, when a device is inserted, a few diagnostics messages will be generated. Error messages might appear here, and can be useful to troubleshoot problems. Error messages are always clearly labeled as such.

Pressing the **Refresh** button will bring the driver diagnostics messages up to date.

Use the **Clear** button to clear all current driver diagnostics messages.



Related topics Main Menu

# **Settings Dialog**

The Settings dialog holds driver sounds settings that are specifically hardware oriented and application options.

# **Application Settings**

AutoConnect

• Opens the Configuration Tool, and connects to the selected Device.

## **Driver Settings**

Sound Settings for devices with sound capabilities.

Disable all Sounds

• The "Disable all Sounds" option enables/disables all devices sounds.

Disable automatic sounds on driver events

• The "Disable automatic sounds on driver events" enables/disables the automatic sounds.

Help

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Application Settings	
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Driver Settings	
Disable all sounds	
Disable automatic sounds on driver even	ts

## **Related topics**

Details List Device Tree Driver Diagnostics

# **Application Launch Failed**

An application was not able to launch through **Kvaser Device Guide**. This is generally due to the application not being installed, or the version of the application is not compatible with device guide.

# Application is not installed

Kvaser Device Guide could not find an installation of the application. Please install the latest version of the application from www.kvaser.com/downloads/. If the application is installed, and it still can't be launced from Device Guide, the path to the installation may have been corrupted. If so a reinstallation of the application is required.

**Note:** Kvaser Device Guide must be restarted after the installation, in order to recognize that the application has been installed.

# Application version is not compatible

The application version is not compatible with Kvaser Device Guide. This may currently only occur for *Kvaser Memorator Configuration Tool*, where version 5.10 or higher is compatible with Device Guide. Please install the latest version of the application from www.kvaser.com/downloads/.

**Note:** Kvaser Device Guide must be restarted after the installation, in order to recognize that the application has been installed.

Related topics Main Menu Device Tree

# Glossary

A CAN controller is Error Passive when its Receive Error Counter or its Transmit Error Counter exceeds 128.
A CAN controller is in the Error Warning state when its Receive Error Counter or its Transmit Error Counter exceeds 96.
A CAN controller which does not take part in the CAN bus traffic in any way (neither send not receive) is said to be Off Bus. A CAN controller goes Off Bus automatically when its Transmit Error Counter exceeds 255.
A CAN controller which takes part in the CAN bus traffic is said to be On Bus.
Some CAN controllers may be in Silent Mode, where they can receive all messages on the bus but do not send anything, not even ACK bits. A typical use for this is bus analyzer tools.
CAN with Flexible Data-Rate (CAN FD) is an extension to the original CAN protocol. CAN FD allow up to 64 bytes of data per frame and higher bitrates. See https://www.kvaser.com/about-can/can-fd/ for more information.
The part of a CAN FD frame that is before the BRS (Bit-rate Switch) bit. The nominal bitrate is used during this part of the CAN FD frame.
The part of a CAN FD frame that is after the BRS bit. If the BRS bit is recessive the data bitrate is used during this part of the CAN FD frame.
If this term is displayed in the details list pane it indicates that there is configuration or firmware issue with the device. Please contact support if this occurs, support@kvaser.com