



# VCI Driver

for Windows

## INSTALLATION GUIDE

4.02.0250.20010 2.9 en-US ENGLISH

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# Important User Information

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# 1 User Guide

Please read the manual carefully. Make sure you fully understand the manual before using the product.

## 1.1 Related Documents

Document	Author
Software Design Guide VCI: .NET-API	HMS
Software Design Guide VCI: C++	HMS
Software Design Guide VCI: C-API	HMS
Software Design Guide VCI: C-API for CAN-FD	HMS

## 1.2 Document History

Version	Date	Description
2.0	May 2016	Revised and edited in new design
2.1	August 2016	Added Manufacturer address
2.2	November 2016	Merged installation guides for software version 3 (VCI V3) and 4 (VCI V4), renamed installation guide <i>VCI Driver</i> .
2.3	March 2017	Minor corrections, adjusted folder structure of driver, minor changes of Device Server Control V4, removed step-by-step instructions for Windows XP
2.4	July 2017	Added CAN@net NT and trademark information
2.5	December 2018	Added information about Disconnect Detection with CAN@net NT, merged installation chapters for different Windows versions
2.6	March 2019	Layout changes
2.7	August 2019	New disclaimer, added link to release notes
2.8	December 2020	Adjusted links, minor corrections
2.9	August 2021	Added system requirements

## 1.3 Trademark Information

Ixxat® is a registered trademark of HMS Industrial Networks. All other trademarks mentioned in this document are the property of their respective holders.

## 1.4 Conventions

Instructions and results are structured as follows:

- ▶ instruction 1
- ▶ instruction 2
  - result 1
  - result 2

Lists are structured as follows:

- item 1
- item 2

**Bold typeface** indicates interactive parts such as connectors and switches on the hardware, or menus and buttons in a graphical user interface.

```
This font is used to indicate program code and other
kinds of data input/output such as configuration scripts.
```

This is a cross-reference within this document: [Conventions, p. 4](#)

This is an external link (URL): [www.hms-networks.com](http://www.hms-networks.com)



*This is additional information which may facilitate installation and/or operation.*

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**This instruction must be followed to avoid a risk of reduced functionality and/or damage to the equipment, or to avoid a network security risk.**

## 2 Features and System Requirements

The VCI is an universal driver for all Ixxat interfaces and already included in the scope of delivery of the interface. As a DLL for Windows the VCI forms the interface between the user application and the various Ixxat interfaces. A special feature is its uniform programming interface, which allows a change between various interface types without adapting the user software.

The VCI supports all current Ixxat-Interfaces. Information about supported versions of the VCI driver is available within the support area of the device in use on [www.ixxat.com/support](http://www.ixxat.com/support).

The VCI V4 runs on any computer that supports Windows 10 (x86 architecture, 32/64 bit). The performance of the complete system depends on the performance of the computer hardware.

This installation guide applies for various VCI driver software versions. When the VCI driver is installed, the names of the automatically installed folders and files correspond to the software version in use. In the following sections the names are referred to the VCI software version 4. If software version 3 is installed the names differ corresponding to the version number.

## 3 Installing the Driver Software



Make sure that the old version is uninstalled before updating to the newer version.



*VCI driver software is constantly improved and expanded!*

*Check if a newer version is available and valid for the device in use within support pages of the device in use on [www.ixxat.com/support](http://www.ixxat.com/support).*

- ▶ Make sure that all other Ixxat programs are closed.
- ▶ Check which VCI version is valid for the device in use.
- ▶ Download the VCI download package from [www.ixxat.com/driver-windows](http://www.ixxat.com/driver-windows).
- ▶ Open the exe file in the drivers directory.
  - Installation wizard starts.
- ▶ In the welcome dialog click button **Next**.
- ▶ Accept the licence agreement.
- ▶ In window **Select Components** select the components to be installed.



*It is possible to select only certain interfaces or full installation.*

- ▶ Follow the instructions in installation program.

## 4 Installing the Hardware

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 *Make sure to be logged in with administrator rights to install the hardware.*

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### 4.1 Installing an Interface

- ▶ Make sure that the driver software is installed (see [Installing the Driver Software, p. 5](#)).
- ▶ Install the interface (see *User Manual* of hardware in use).
- ▶ Boot Windows.
  - Hardware wizard starts automatically.
- ▶ In welcome dialog click button **Next**.
  - Windows finds driver for new interface.
- ▶ To finish the installation click button **Finish**.
  - Interface is visible in Windows Device Manager and ready to use.

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 *If driver is not found see [Troubleshooting, p. 15](#).*

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### 4.2 Installing CAN@net NT

- ▶ Go to **Start menu — Ixxat VCI** and open **VCI Device Server Control**.

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 *With VCI V 3 go to **Start menu — All programs — HMS — Ixxat® VCI 4.0** and open **VCI Device Server Control**.*

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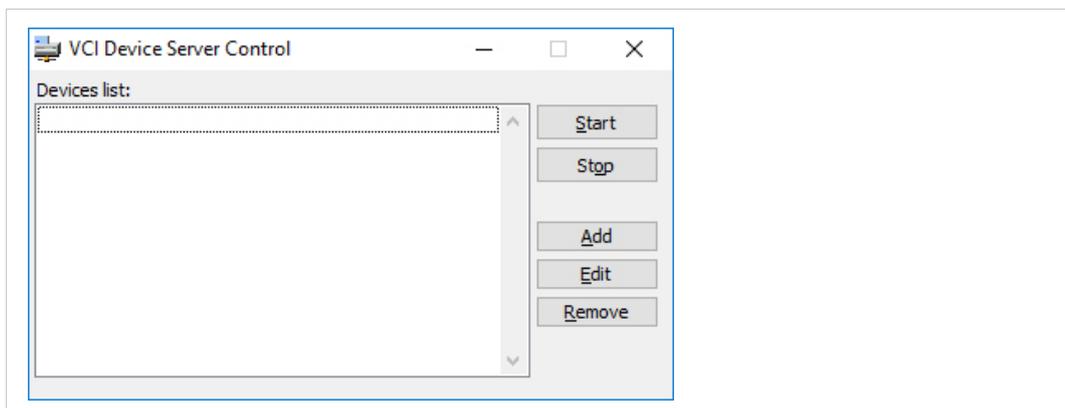


Fig. 1 VCI Device Server Control V4

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 *With VCI V 3 two lists are shown: **Available Devices** and **Running Devices**.*

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- ▶ To add a new device click button **Add**.
  - Window **Add Device** is opened.

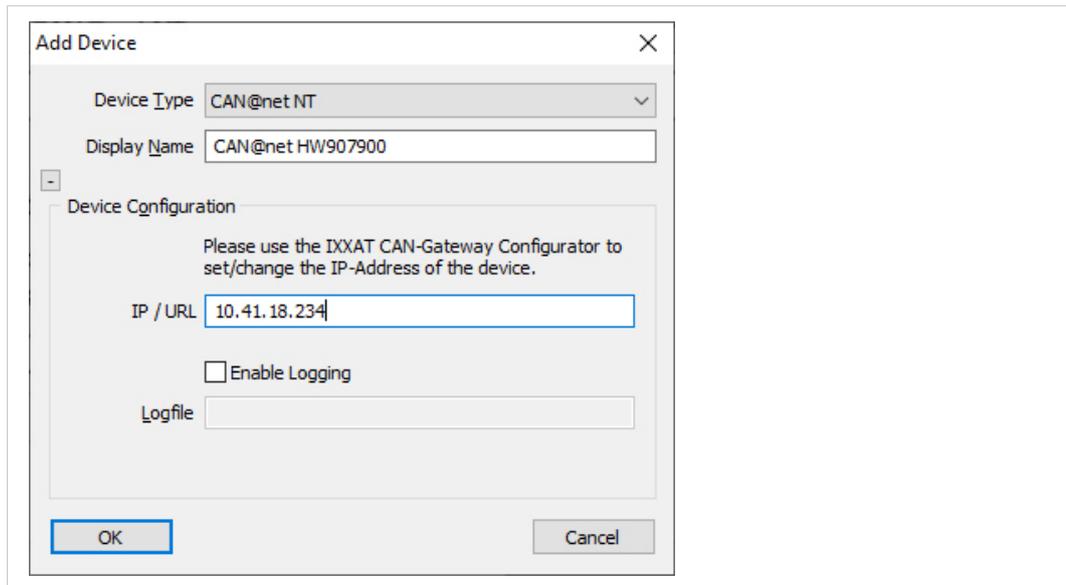


Fig. 2 Add Device

- ▶ In field **Device Type** select CAN@net NT.
- ▶ In field **Display Name** enter a name for the new device.



*The name of the device is displayed in the VCI Device Server Control.*

- ▶ Enter IP of device in use in field **IP/URL** (to set IP address of CAN@net NT see *User Manual CAN@net NT*).
- ▶ Adjust special settings if necessary.

Special settings		
Setting	Enabled	Disabled
Logging	Debugging information is stored during usage of the device. Necessary if HMS Industrial Networks support needs logging files.	Debugging information is not stored.



*With the CAN@net NT TCP/IP connection monitoring is activated. The VCI Device Server cyclically checks if the connection between computer and device is still established. A connection breakdown is recognized after approximately 15-20 seconds. The device is then removed from VCI and the reestablishment of the connection is attempted. When the device is successfully found it is announced to VCI and is available for VCI applications. After reconnecting CAN controller and filter settings are lost. The interface must be started and initialized again in the application.*

- ▶ Click button **OK** to confirm.
  - Device is shown in **Devices list**.

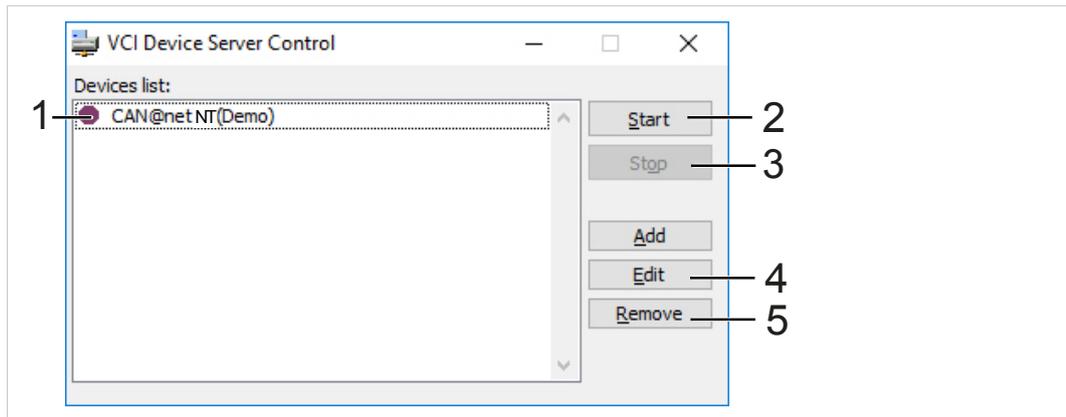


Fig. 3 VCI Device Server Control V4

**i** With VCI V 3 the devices are displayed in two lists: **Available Devices** and **Running Devices** (instead of the symbols in VCI V4).

- ▶ Select the device in list (1) and click button **Start** (2).
  - Device is announced to VCI (indicated by green symbol ●).
  - When the device is ready to use with the VCI application, symbol ✓ is shown.

**i** To test if the connection succeeded, start canAnalyser Mini. All started devices are shown in the list of available CAN channels.

- ▶ To stop a running device select the device in the list and click button **Stop** (3).
  - Selected device is ready to edit or remove.
- ▶ To configure an existing device select the device in the list and click button **Edit** (4).

To remove an existing device:

- ▶ Select the device in the list.
- ▶ Click button **Remove** (5).
- ▶ Confirm security message with **Yes**.

**i** VCI Device Server Control is only used for configuring VCI devices. Announcement and removal is done by Ixxat VCI V4 Device Server Service. Devices are controlled by INI-files stored in folder Documents and Settings/Application Data/Ixxat/VCI/4.x. For more information read Readme.txt in folder Program Files/HMS/Ixxat VCI 4.0/Device Server.

### 4.3 Installing CAN@net II

- ▶ Go to **Start menu — Ixxat VCI** and open **VCI Device Server Control**.

 With VCI V 3 go to **Start menu — All programs — HMS — Ixxat® VCI 4.0** and open **VCI Device Server Control**.

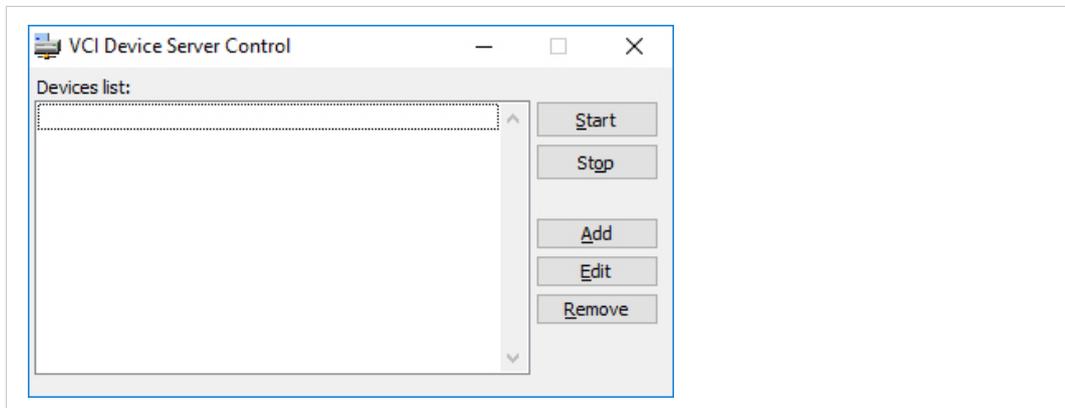


Fig. 4 VCI Device Server Control V4

 With VCI V 3 two lists are shown: **Available Devices** and **Running Devices**.

- ▶ To add a new device click button **Add**.  
→ Window **Add Device** is opened.

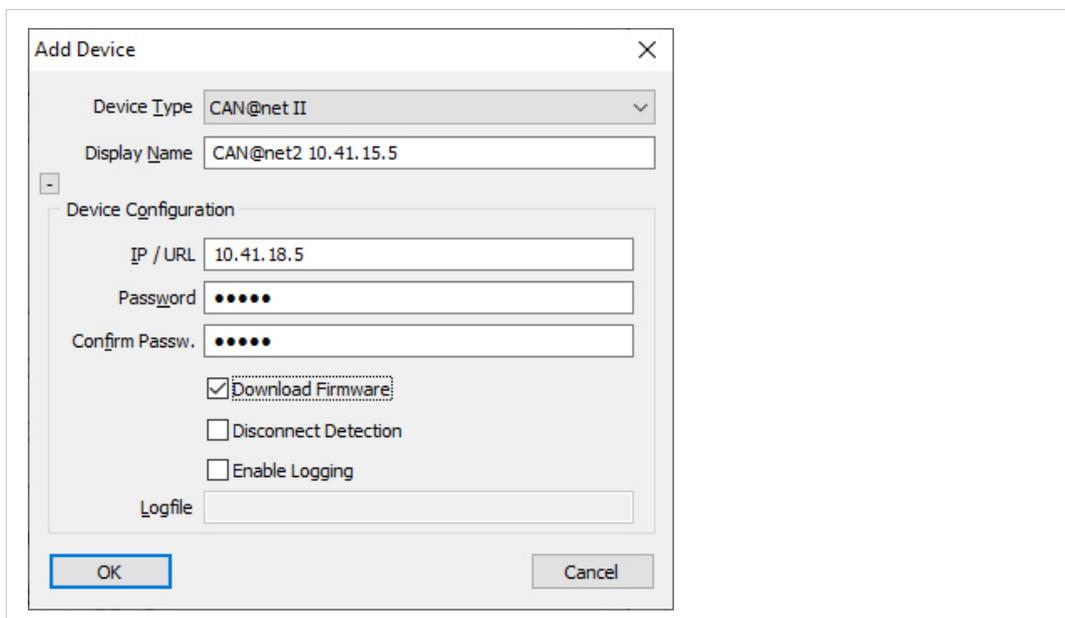


Fig. 5 Add Device

- ▶ In field **Device Type** select CAN@net II.
- ▶ In field **Display Name** enter a name for the new device.

 The name of the device is displayed in the VCI Device Server Control.

Determine IP-address with CAN@net II Configurator:

- ▶ Go to **Start menu — All programs — HMS — Ixxat® VCI 4.0** and open **CAN@net II Configurator**.



Scanning problems caused by different Ethernet ports!

If device is not found, connect the device to the main (first) Ethernet port.

- ▶ Make sure that CAN@net II and network interface are located in the same IP address domain (IP and subnet), e.g. PC Ethernet port 192.168.1.55 / CAN@net 192.168.1.xxx.

Edit settings:

- ▶ In field **IP/URL** enter IP-address of CAN@net II.
- ▶ In field **Password** enter password. The preset password is IXXAT.
- ▶ In field **Confirm Passw.** enter password again.
- ▶ Adjust special settings if necessary.

Special settings		
Setting	Enabled	Disabled
Download Firmware	Firmware of the device is downloaded on the device on every start.	Useful when using slow connections. Firmware has to be flashed permanently on the device with flash programming software (see support area on <a href="http://www.ixxat.com">www.ixxat.com</a> ).
Logging	Debugging information is stored during usage of the device. Necessary if HMS Industrial Networks support needs logging files.	Debugging information is not stored.
Disconnect Detection	Enables TCP/IP connection monitoring. Cyclically checks if the connection between computer and device is still established. A connection breakdown is recognized after approximately 15-20 seconds. The device is then removed from VCI and the reestablishment of the connection is attempted. When the device is successfully found it is announced to VCI and is available for VCI applications. CAN controller and filter settings are lost.	

- ▶ Click button **OK** to confirm.
  - Device is shown in **Devices list**.

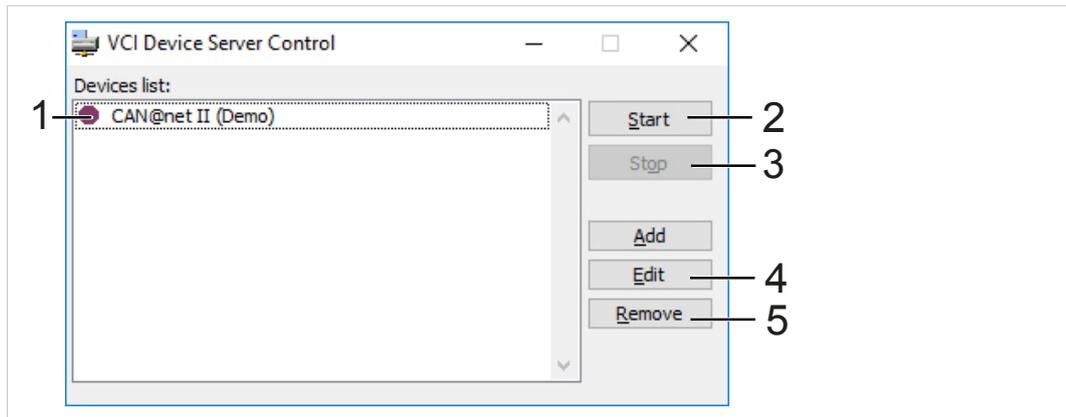


Fig. 6 VCI Device Server Control V4

**i** With VCI V 3 the devices are displayed in two lists: **Available Devices** and **Running Devices** (instead of the symbols in VCI V4).

- ▶ Select the device in list (1) and click button **Start** (2).
  - Device is announced to VCI (indicated by green symbol ●).
  - When the device is ready to use with the VCI application, symbol ✓ is shown.

**i** To test if the connection succeeded, start canAnalyser Mini. All started devices are shown in the list of available CAN channels.

- ▶ To stop a running device select the device in the list and click button **Stop** (3).
  - Selected device is ready to edit or remove.
- ▶ To configure an existing device select the device in the list and click button **Edit** (4).

To remove an existing device:

- ▶ Select the device in the list.
- ▶ Click button **Remove** (5).
- ▶ Confirm security message with **Yes**.

**i** VCI Device Server Control is only used for configuring VCI devices. Announcement and removal is done by Ixxat VCI V4 Device Server Service. Devices are controlled by INI-files stored in folder Documents and Settings/Application Data/Ixxat/VCI/4.x. For more information read Readme.txt in folder Program Files/HMS/Ixxat VCI 4.0/Device Server.

## 4.4 Installing CANblue II

- ▶ Make sure, that CANblue II is connected (see User Manual *CANblue II*).
- ▶ Go to **Start menu — Ixxat VCI**.



With VCI V 3 go to **Start menu — All programs — HMS — Ixxat® VCI 4.0**.

- ▶ Right-click on **VCI Device Server Control** and execute it with administrator rights.



The Bluetooth® connection can only be established if **VCI Device Server Control** is executed with administrator rights (although there is no visible difference when starting as normal user).

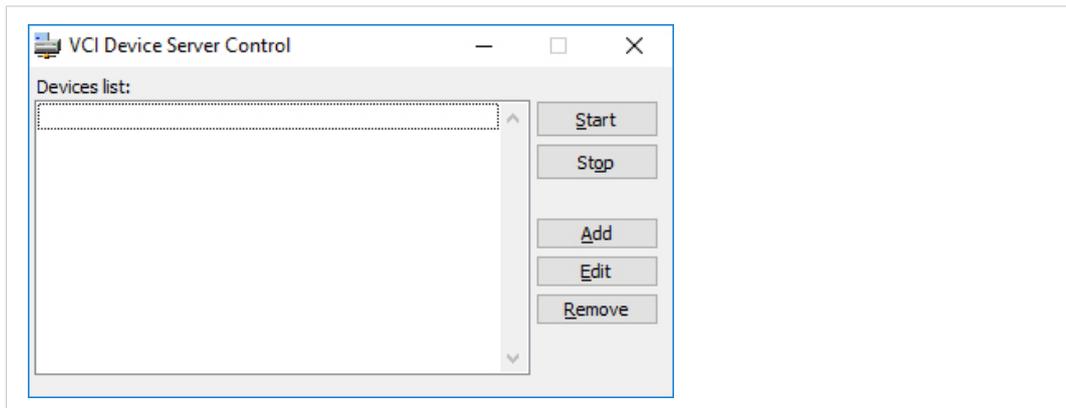


Fig. 7 VCI Device Server Control V4



With VCI V 3 two lists are shown: **Available Devices** and **Running Devices**.

- ▶ To add a new device click button **Add**.
  - Window **Add Device** is opened.

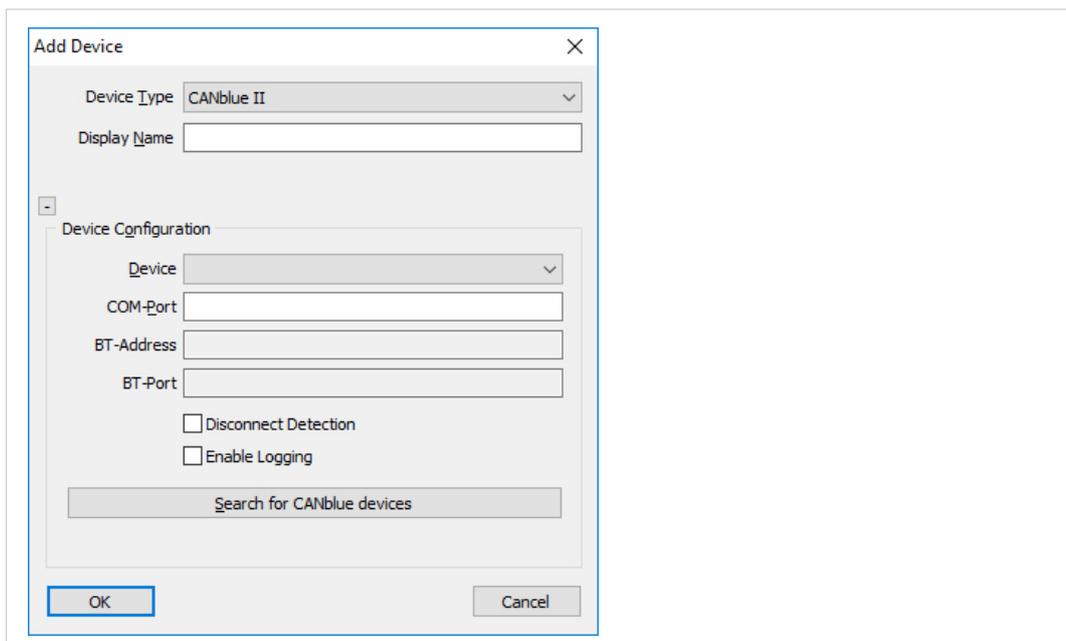


Fig. 8 Add Device

- ▶ In field **Device Type** select CANblue II.
- ▶ In field **Display Name** enter a name for the new device.



*The name of the device is displayed in the VCI Device Server Control.*

#### Define the device using a Bluetooth® address:

- ▶ Click button **Search for CANblue devices**.
  - Detected devices are listed in drop-down list **Device**.
- ▶ If device is not found, make sure that the device is switched on and within range.
- ▶ Click button **Search for CANblue devices** again.
- ▶ Select the device in use in list **Device**.
  - Fields **BT-Address** and **BT-Port** are completed automatically.

#### Define the device using COM-Port:

- ▶ In field **Device** select **user defined**.
- ▶ Search for the device using Bluetooth stack software.
- ▶ Assign COM-Port to Bluetooth service **Serial Ports (SPP)** named **Config** (for detailed instruction see *CANblue II User Manual*).
- ▶ In field **COM-Port** enter COM-Port.

#### Further settings

- ▶ Adjust special settings if necessary.

Special settings		
Setting	Enabled	Disabled
Logging	Debugging information is stored during usage of the device. Necessary if HMS Industrial Networks support needs logging files.	Debugging information is not stored.
Disconnect Detection	Enables Bluetooth connection monitoring. Cyclically checks if the connection between computer and device is still established. A connection breakdown is recognized after approximately 30-40 seconds. The device is then removed from VCI and the reestablishment of the connection is attempted. When the device is successfully found it is announced to VCI and is available for VCI applications. CAN controller and filter settings are lost.	

- ▶ Click button **OK** to confirm.
  - Device is shown in **Devices list**.

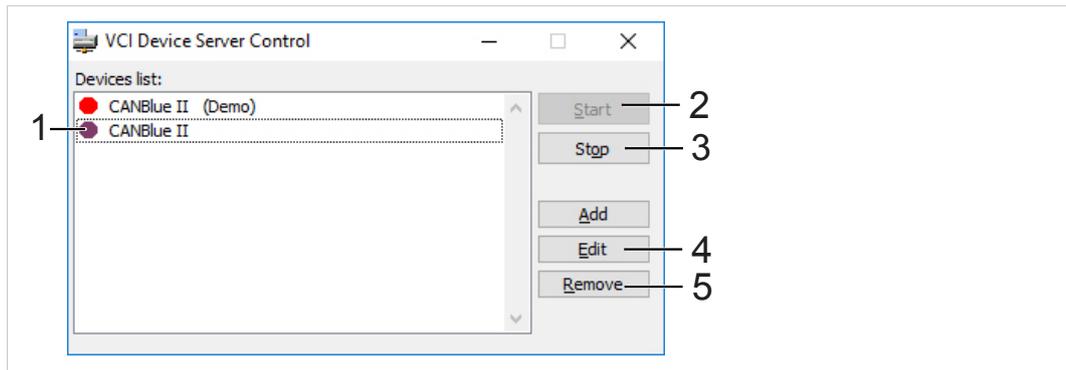


Fig. 9 VCI Device Server Control V4

**i** With VCI V 3 the devices are displayed in two lists: **Available Devices** and **Running Devices** (instead of the symbols in VCI V4).

- ▶ Select the device in list (1) and click button **Start** (2).
  - Device is announced to VCI (indicated by green symbol ●).
  - When the device is ready to use with the VCI application, symbol ✓ is shown.

**i** To test if the connection succeeded, start canAnalyser Mini. All started devices are shown in the list of available CAN channels.

- ▶ To stop a running device select the device in the list and click button **Stop** (3).
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## 5 Updating to Newer Driver Version

- ▶ On [www.ixxat.com/support](http://www.ixxat.com/support) select your device in use and open **Downloads and Documents**.
- ▶ Check the VCI version in **02 - Windows Driver** and the *VCI Release Information* file.
- ▶ Uninstall old version.
- ▶ Download and install new version without reboot.
- ▶ After successful installation reboot the computer.

## 6 Troubleshooting

### 6.1 Interface Installation: Driver Not Found

#### Possible cause of failure:

- Hardware was installed before VCI installation
- INF files of driver CD were installed via right-hand mouse button

For the hardware installation the location of the relevant INF file is required. INF files are not available in unpacked form and must be installed via the hardware wizard.

#### Remedial actions:

- ▶ Abort the hardware wizard.
- ▶ Install the VCI Driver.
- ▶ Restart Windows.
  - Hardware is automatically detected.
  - Hardware-wizard starts automatically.

## 7 Parallel Usage of Different Driver Versions

#### VCI V2 and V3

VCI V2.20 is a compatibility layer for VCI V3.5. By that it is possible to use VCI V2 applications on 64 bit versions of Windows. Furthermore the parallel usage of one interface with VCI V2 and VCI V3 is possible without switching the drivers.

#### VCI V2 and V4

The parallel usage of VCI V2.20 and VCI V4 is not possible. An Add-on for the support of VCI V2.20 by VCI V4 is included in download package of the VCI V4.

#### VCI V3 and V4

The parallel usage of one interface with VCI V3 and one with VCI V4 is not possible.

## 8 Support

- ▶ To contact support, go to [www.ixxat.com/technical-support/contact-technical-support](http://www.ixxat.com/technical-support/contact-technical-support).
- ▶ Scroll down and click button **mysupport.hms.se** to register a support case.

