	Type **Guideline**		Product	
	Name **CANopen ConfTool Getting Started Guide**		Project Code CANOPEN CONF	
Author **HS/HL**	Department R&D		Date **2024-09-27**	
Checked	File Name CANopen Configuration Tool - Getting Started Guide.odt		Printed	
Approved		Revision	Classification **PUBLIC**	Page **1 (9)**
Copyright © TK Engineering Oy. All rights reserved. Reproduction, use or disclosure to third parties without express authority is strictly forbidden.				

Follow this guide to quickly start using CANopen ConfTool.

Table of Contents

1 Install ConfTool

After you have downloaded the zip package from our website, you need to following below procedures to install ConfTool.

1. Unzip the install package into a separate folder.

2. Double click on the executable file to install ConfTool. You need to be an administrator to do this.

3. **Install the latest driver of your CAN hardware on your PC if you haven't installed it yet.**

4. Plug your CAN hardware into your PC via USB and wait until Windows has installed the driver successfully

5. Configure the CAN hardware in LocalHWInterface.xml in CANopenConfTool folder in public user's documents folder. Read here for how to configure.

6. Find the serial number of your CAN hardware and get the demo/full license from TKE. Read here for how to find the serial number.

7. In the same folder, add your license key to License.txt file. Read here for how to add the license.

8. Now ConfTool is ready to use.

2 Hardware configuration

Open the hardware configuration file ***C:\Users\Public\Documents\CANopenConfTool\LocalHwInterface.xml***

using Notepad or Notepad++

Navigate to the tag <hardwareconfig>

Find the tag <channelnr> under tag <channelnumber>

Find the tag <driver> under tag <hardwaredriver>

Set the parameter according to the CAN-USB hardware brand listed in below table.

CAN-USB brand	<channelnr>	<driver>
Kvaser	0	KVASERlibPlugin
Vector	1	VectorLibPlugin
Peak	0	PeakLibPlugin
TKE CastorUSB	0	CastorUSBPlugin

Save and close this file.

3 Add License

A special file "**C:\Users\Public\Documents\CANopenConfTool\License.txt**" is used to store the license keys. Open this file and paste the license key as a new row and save and close the file.
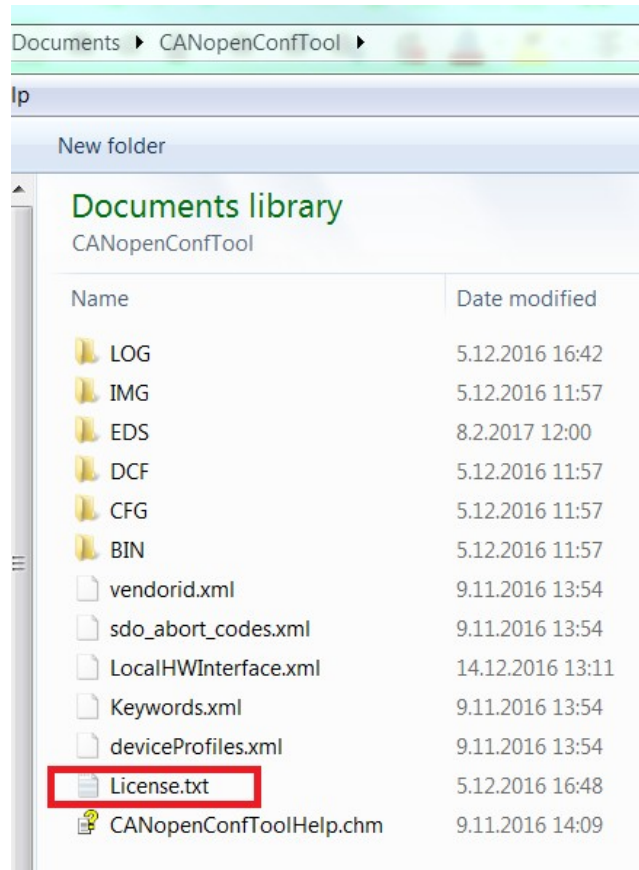
Figure 1: License File location

Correct key for a full licenses looks like:

1C55B7F3 C6EE9E70 B02D4BA6 C5388910 FFE2C64C

and for a demo license:

2E5D5B90 FD505805 4EA6839B 62DE807B F526D10C|1411503613|1017

Please remember that there are white spaces between the character groups, but there shall not exist leading or trailing white spaces or line breaks. Please also remember, that the key has been generated based on either PC-hardware or interface serial number.

If CANopen ConfTool is just not working, please check following items before contacting TKE:

1. You have installed the device drivers. You may need administration rights for installing the drivers. If you have normal user rights, please contact your IT department.

2. You have installed CANopen ConfTool. You need administration rights for installing the software.

3. Your CAN-interface is properly visible and operating as a USB-device. Sometimes you need to disconnect and connect again the interface hardware.

4. You have sent proper hardware serial number. Either get the serial number printed on the hardware or from the Hardware configuration tool made by the hardware vendor.

5. You have copied the license key without modifying it. The keys are case sensitive and leading or trailing line breaks and white spaces may be accidentally included.

6. You have re-started CANopen ConfTool.

4 Find Serial Number

4.1 Kvaser Hardware

The serial number is printed on the Kvaser USB-CAN hardware. It can also be retrived from Kvaser Hardware Configuration which is a tool installed when you install the driver.

Keep the Kvaser hardware plugged in to the PC when reading the serial number from the tool.

4.2 Vector Hardware

The serial number is printed on the Vector USB-CAN hardware. It can also be retrived from Vector Hardware which is a tool installed when you install the driver.

Keep the Vector hardware plugged in to the PC when reading the serial number from the tool.

4.3 Peak Hardware

Some Peak USB-CAN hardware doesn't have serial number printed on the hardware. In order to get the serial number of the hardware, you need to follow below procedures.

After you have finished the configuration of LocalHwInterface.xml, plug in your Peak hardware to PC and open ConfTool. Select a bautrate and scan the bus. ConfTool will check the license and the logging area will report the serial number for the Peak hardware. For example, below image shows the serial number for a Peak USB-CAN hardware. Send this serial number to info@tke.fi for a trial license.
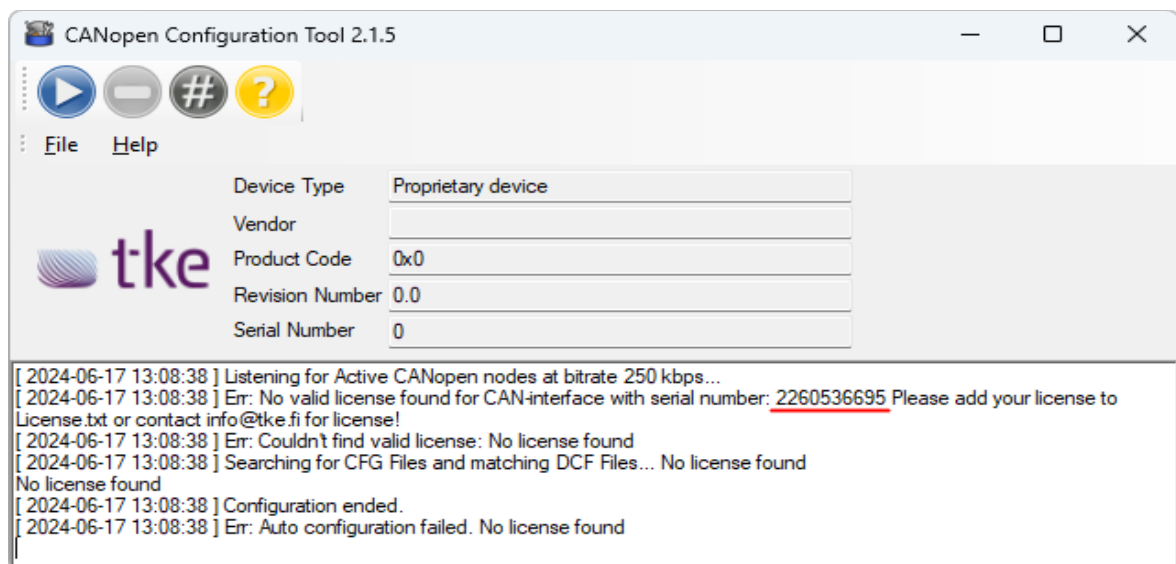

Figure 2: Find Peak hardware serial number

4.4 CastorUSB

CastorUSB is a USB-CAN hardware manufactured by TKE. Follow below procedure to find the serial number of your CastorUSB.

After you have finished the configuration of LocalHwInterface.xml, plug in your CastorUSB hardware to PC and open ConfTool. Select a bautrate and scan the bus. ConfTool will check the license and the logging area will report the serial number for the CastorUSB hardware. For example, below image shows the serial number for a CastorUSB hardware. Send this serial number to info@tke.fi for a trial license.

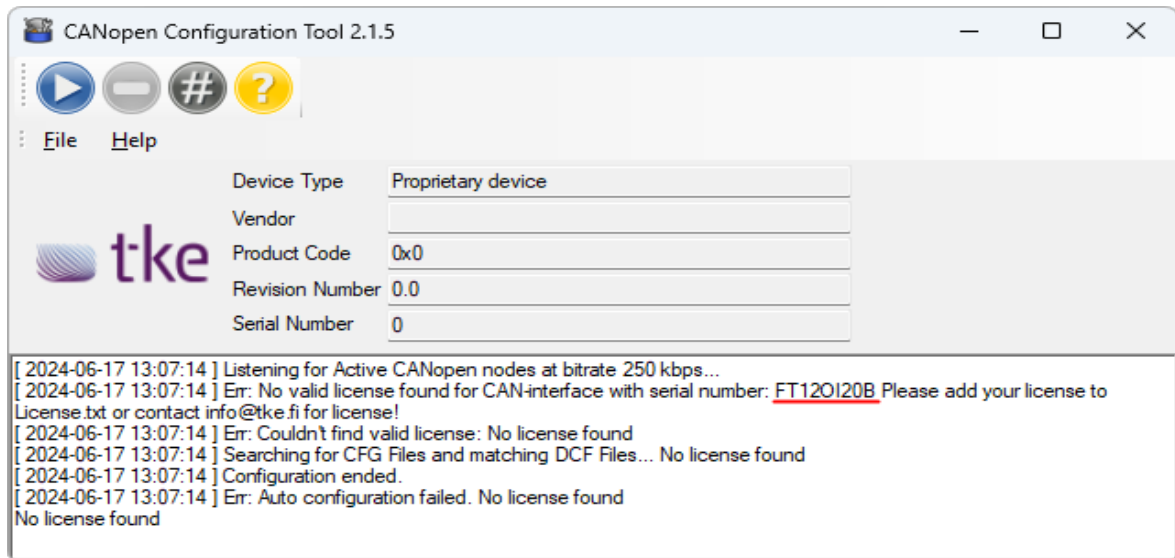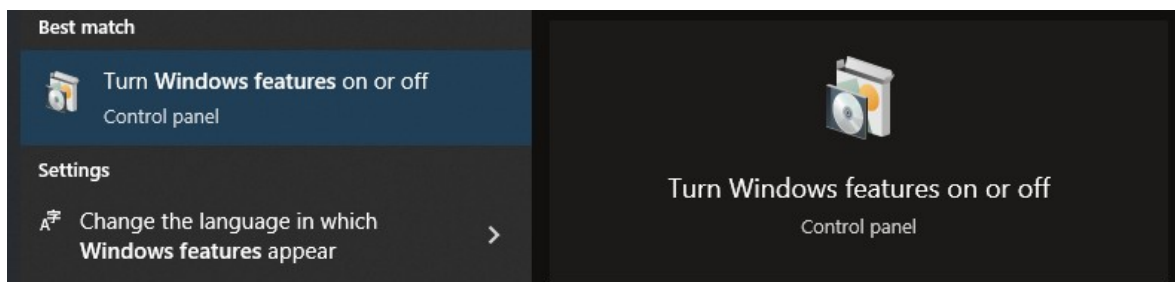*Figure 3: Find CastorUSB serial number*

5 Troubleshooting

5.1 .NET Framework 2.0

CANopen ConfTool is targeted towards .NET Framework version 2.0. You might need to enable .NET Framework 3.5 (which includes .NET 2.0). Doing this requires an Internet connection.

Open to the Windows Start menu and search for "Windows features". Click on **Turn Windows features on or off**.

Select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** and click OK. This will download and install the required software.
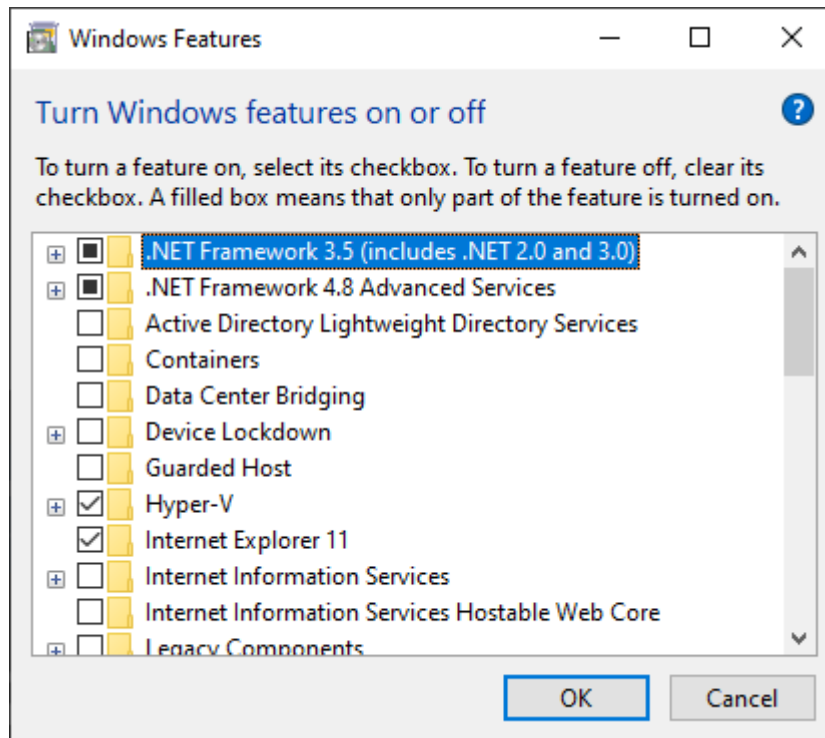
5.2 General

- You need administrative rights to install ConfTool

- Make sure there is enough free disk space on the drive where you will install ConfTool.

- Try using control panel to remove any previous version of ConfTool before installing the new one

- Contact support@tke.fi or your contact person at TKE for help with your Windows OS info(32 or 64 bit, edition type), ConfTool version and the error message you got when the installation fails

6 Using ConfTool

Click on Help button in ConfTool and refer to the help document chapter called How to for detailed instructions of how to use differnet mode to configure the CANopen device.

7 Connecting to Your Node Using EDS File

To be able to communicate with a CANopen node, CANopen Configuration Tool needs an EDS file for the specific brand and model of your node.

The EDS file must be placed in this folder:

- C:\Users\Public\Documents\CANopenConfTool\EDS

The EDS file must exactly match your node. This means the following parameters must match:

- Device Type

- Vendor Id

- Product Code

You may have received an EDS file containing parameter values that do not exactly match with the product. In this case you can either ask the manufacturer for a revised EDS file, or edit the EDS file yourself, as illustrated in the following example.

During the scan, the log output will indicate whether a matching EDS file was found. In the example figure below, the Product Code was incorrect in the EDS file.
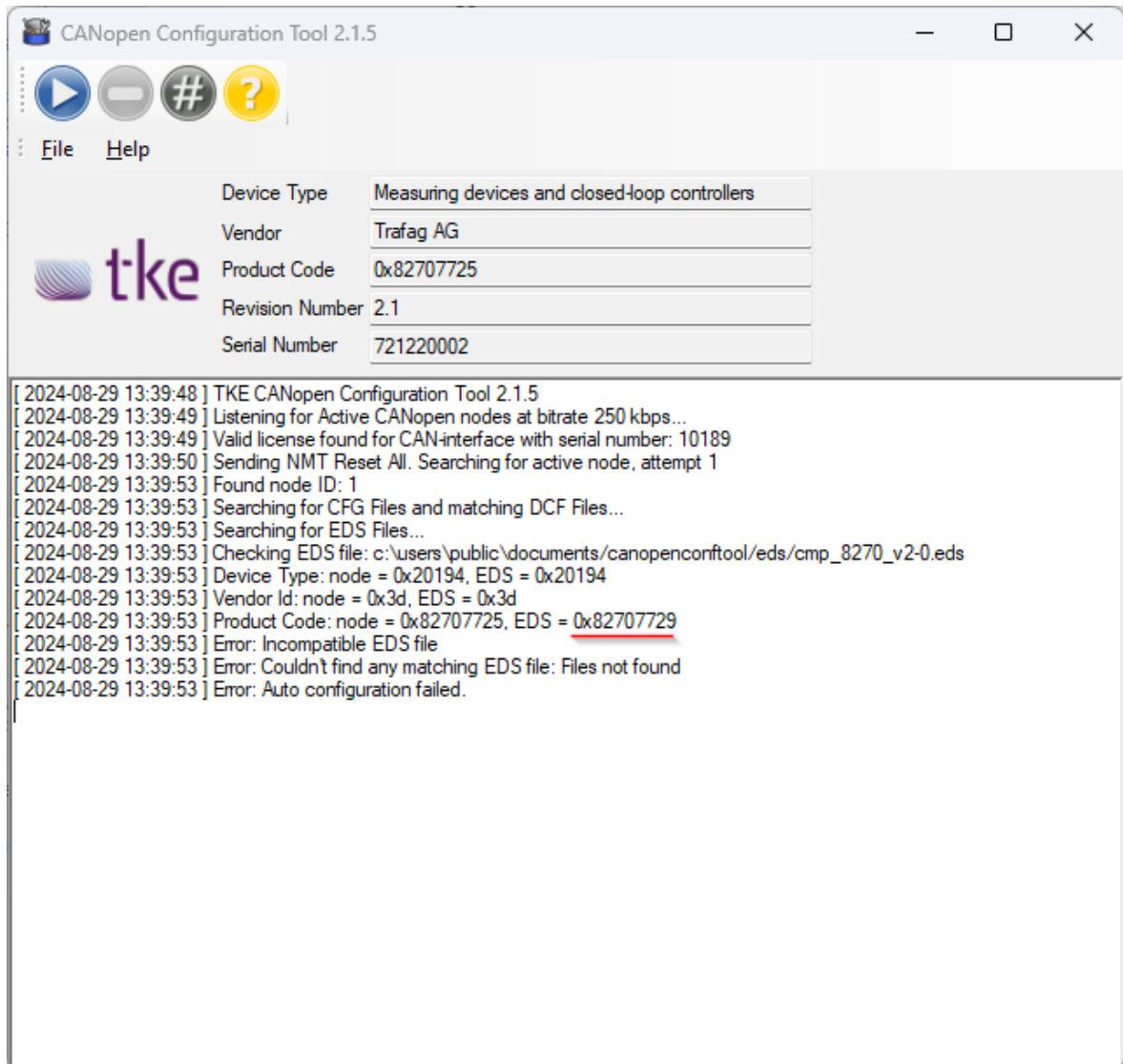
This kind of mismatch can most often be resolved by editing the EDS file in a text editor. Find the Product Code and edit its DefaultValue to have the same value as the node. The figure below shows the location of the incorrect value.

```
[1000]
ParameterName=Device Type
ObjectType=0x7
DataType=0x0007
AccessType=ro
DefaultValue=0x00020194
PDOMapping=0

...

[1018sub1]
ParameterName=Vendor-ID
ObjectType=0x7
DataType=0x0007
AccessType=ro
DefaultValue=0x0000003D
PDOMapping=0

[1018sub2]
ParameterName=Product Code
ObjectType=0x7
DataType=0x0007
AccessType=ro
DefaultValue=0x82707729
PDOMapping=0
```

Bundled with the ConfTool Installer, we provide the EDS files for some of our and our partners' products. After installation the EDS folder will contain the latest EDS files for:

- Cobo AMU-CB inclinometer {*amucb360.eds*}
- Cobo AMU-GEO inclinometer, both for the latest production version {*AMU-GEO 360.eds*} and for the 0-series {*amugeo360.eds*}
- TKE CDVD valve driver {*CDVD-10.02_V1R4_2016-03-02.eds*}
- TKE TCS-10 / WCS-10 CAN switch {*wcs10_tcs10_v1r19_fw0x1002e.eds*}
- TKE XY-CAN-ED 2-axis inclinometer {*xy-can-ed_v01010030.eds*}
- TKE XY-CAN-EF 3-axis inclinometer {*xy-can-ef_v03000002.eds*}

When you connect any of these products to your CAN bus and scan for nodes with ConfTool, the software will automatically select the appropriate EDS file.

8 Uninstall ConfTool

Please go to Control Panel→ Programs→ Uninstall a program and uninstall ConfTool.

9 Legal Information

9.1 About This Manual

This document is Copyright © 2024 TK Engineering Oy.

This document may not be reproduced without our prior written permission.

We believe that the information in this user guide was accurate at the time of printing. TK Engineering Oy cannot, however, assume responsibility for any errors or omissions in this document. The information in this document is subject to change without notice and should not be taken as a commitment by TK Engineering Oy.

9.2 Trademarks

All product names mentioned in this manual are registered or unregistered trademarks of their respective owners.

10 References