CPC-Series Runtime Kit for MS-Windows Environment
User manual

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1 Introduction

This document describes the MS-WINDOWS Runtime Kit for EMS CAN Interfaces.

The following chapter describes the installation and configuration of the CPC-Series Runtime Kit for MS-WINDOWS Environment.

1.1 Driver Overview

The following table shows which operating systems are supported by EMS interfaces:

<table>
<thead>
<tr>
<th>Windows Runtime Kit</th>
<th>WRK 5.xx</th>
<th>WRK 4.xx</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS CAN Interfaces</td>
<td>all CPC-USB/ARM7 versions, CPC-USB/bridged,</td>
<td>all CPC-USB/ARM7 versions,</td>
</tr>
<tr>
<td></td>
<td>CPC-USB/FD*, EtherCAN CI-ARM9/RMD</td>
<td>EtherCAN CI-ARM9/RMD</td>
</tr>
<tr>
<td></td>
<td>EtherCAN CI-ARM7/RMD</td>
<td>EtherCAN CI-ARM7/RMD</td>
</tr>
<tr>
<td></td>
<td>all CPC-PCI/SJA1000 boards</td>
<td>all CPC-PCI/SJA1000 boards</td>
</tr>
<tr>
<td></td>
<td>all CPC-PCIe/SJA1000 boards, all CPC-104P/SJA1000 boards</td>
<td>all CPC-PCIe/SJA1000 boards, all CPC-104P/SJA1000 boards, CPC-USB/M16C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* only for CAN 2.0A and 2.0B messages
2 Installation

2.1 Installation Hints

Depending on the interface you are installing the driver for, there are some supplementary steps to be done during and after the installation.

All interfaces not mentioned below do not require further installation steps.

We recommend to plug the interface before installing the runtime kit and to skip the Microsoft hardware wizard when it appears. During the installation process a ‘cpcconf.ini’ will be created, if it is not already present, containing entries for the actually connected interfaces.

When you are installing an update for the Windows Runtime Kit, it is recommended to uninstall the previous version first to avoid a version conflict.

Example for the version number of our Windows Runtime Kit:

\[
\begin{align*}
5.09 \\
\text{major version} & \quad \text{minor version}
\end{align*}
\]
2.2 Installation Process

Doubleclick wrkxxxx.exe to see the following screen appear:

Click ‘Next’ and you see the important information:
Click ‘Next’ and choose your destination directory. Please note it is recommended to accept the suggestion:

**Choose Install Location**

Choose the folder where Windows Runtime Kit 64bit should be installed.

Setup will install Windows Runtime Kit 64bit in the following folder. To choose a different folder, click Browse. Click Next to continue.

Destination Folder

![Destination Folder](image)

Click ‘Next’ and choose the components that will be installed.

**Choose Components**

Choose which features of Windows Runtime Kit 64bit should be installed.

Check the components that should be installed or uncheck them to avoid installation. Click Next to review your settings.

Description

Install Windows Runtime Kit 64bit 5.9.0

This feature requires 48.10KB on your hard drive. It has 3 of 3 subfeatures selected. The subfeatures require 17MB on your hard drive.

Space required: 44MB

Space available: 64GB

If this is the first installation, it is recommended to check all boxes.
Click 'Next' and select your additional options:

Click 'Next' and you see a review of the installing settings:
Click ‘Install’ to begin with the installation process.

After the installation click ‘Finish’ to exit the setup program.
3 CAN Channel Configuration

3.1 The file 'cpccconf.ini'

The configuration of the different CAN channels used by the application is done within the file ‘cpccconf.ini’ that is copied to the Windows root directory at installation time.

The file contains different sections named [CHANXX] where ‘XX’ is a number between 00 and 99.
Example for a section:

; Entry created on Wednesday, 17. April 2019 09:39:36
[CHAN00]
InterfaceType=CPC-PCI
BusNr=0
SlotNr=11
ChannelNr=1

The parameters within the sections depend on the type of the interface. The parameter ‘InterfaceType’ is mandatory. The following Interfaces are supported at this time:

CPC-PCI *
CPC-USB **
ETHERCAN

* represents CPC-PCIe and CPC-104P interfaces also
** represents CPC-USB/embedded and CPC-USB/FD interfaces also
**Additional parameters:**

**CPC-PCI**
BusNr=X (the PCI bus number)
SlotNr=X (the PCI slot number)
ChannelNr=X (0, 1, 2, 3: the channel on the board)

The values for the bus number and slot number can be retrieved by using the ‘pcidetect.exe’ tool that is located within the ‘tools\pci’ path of your installation. The values can be entered as HEX (0x10) or DECIMAL (16) numbers.

**ETHERCAN**
IpAddress=XXX.XXX.XXX.XXX (IP address)
IpPort=XXXX (the server port)

**CPC-USB**
SerialNumber=XXXXXXX (the devices serial number)

Note: if only one device is connected, the serial number may be set to ‘99999999’. However, if you use more than one interface or plan to connect and disconnect the device upon operation, the correct serial number must be entered.

Upon installation of an interface modifications are made to ‘cpcconf.ini’. If no file exists a new file is created and the interface parameters are inserted. If a file already exists, the user has to decide if the file should be overwritten by a new one or if the new parameters should be appended to the existing file. Please notice that if the latter is chosen, the installation program will create commented sections with section numbers XX. An appended section could look like this:
; Entry created on Wednesday, 17. April 2019 09:24:43
; [CHANXX]
; InterfaceType=CPC-PCI
; BusNr=0
; SlotNr=11
; ChannelNr=1

The customer then has to modify ‘cpcconf.ini’ to reflect his current environment by deleting the semicolon at the beginning of each line as well as assigning a correct section number.

The ‘cpcconf.ini’ file allows the changing of interfaces and CAN channels without having to modify the application.
3.2 Using CPC-Conf Editor

CPC-Conf Editor (Start->Programs->EMS CPCwin->CPC-Conf Editor) is used to edit the file cpcconf.ini in a more convenient way. CPC-Conf Editor needs admin rights to be started.

The left side shows channels which are actually configured and the right side shows a list of interfaces which may be configured. The right side shows also our legacy products which are no longer supported by WRK version 5.00 or later.