

Chapter I

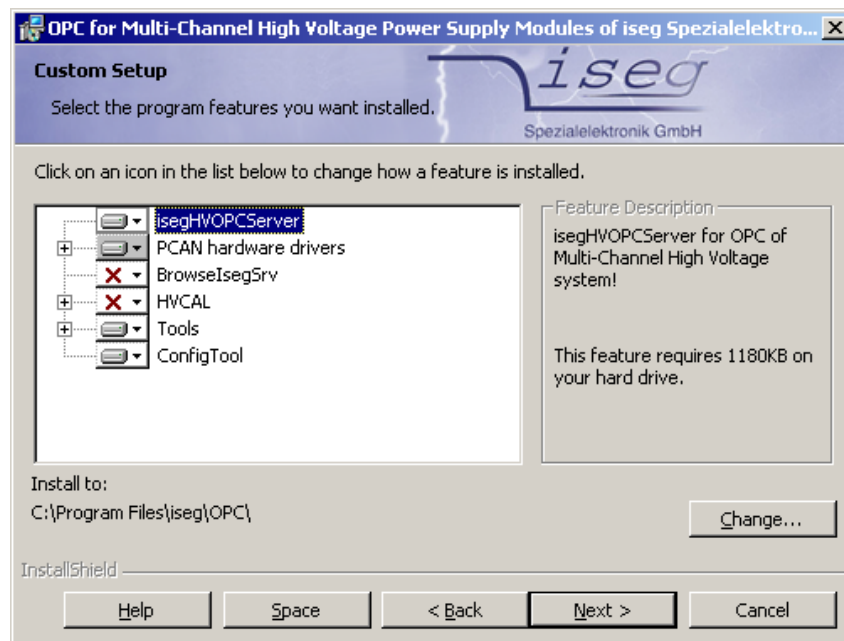
Setup of the *isegHVOPC* software package.

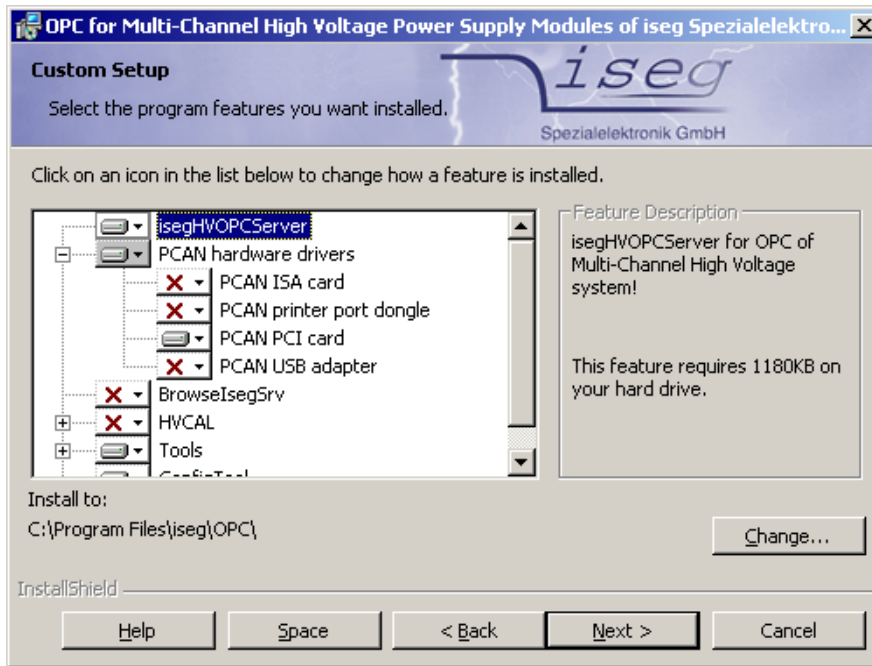
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1 Components of the setup program

OPC Server for Multi-Channel HV devices and for iseg system crates	<i>isegHVOPCServer.exe</i>
Configuration tool to establish the namespaces and edit in a graphical dialog the initializing file <i>isegHVOPCServer.ini</i>	<i>isegHVOPCcfg.exe</i>
OPC Client <i>isegHVOPCUserNameSpace</i> to establish an user namespace for the HV Multi-Channel devices	<i>isegHVOPCUserNameSpace.exe</i>
PCAN hardware drivers	<i>CanApi2.dll</i>
ISA card	<i>isegHVOPCServer.ini</i>
Parallel port Dongle	<i>isegHVOPCServer.ini</i>
PCI card	<i>isegHVOPCServer.ini</i>
PCAN_PCI	<i>PCAN_PCI.INF</i> <i>PCAN_PCI.SYS</i>
USB card	<i>isegHVOPCServer.ini</i>
PCAN_USB	<i>PCAN_USB.INF</i> <i>PCAN_USB.SYS</i>
Calibration program of EHQ HV modules	<i>EHQCAL</i> <i>SetOhm.exe</i>
Tools	<i>PeakCAN</i>





displaying several PEAK CAN hardware devices with different setup adjustments

2 How to set up the *isegHVOPC* package

2.1 Introduction

The aim of the *isegHVOPCServer* is to connect the *iseg* high voltage modules to a PC by using the CAN bus interface. The CAN bus PC hardware used by *iseg* is from the PEAK company. The software from *iseg* is based on the device drivers from PEAK. The drivers for non Plug-and-Play hardware are installed during the setup (ISA card, printer port dongle). The drivers for Plug-and-Play hardware have to be installed after the installation of the *iseg* software (PCI card or USB adapter). The *iseg* CAN system library comes with this OPC server and is installed during the set up procedure of the OPC server.

The *iseg* OPC package installation media contains all files which are needed to connect the HV modules to the PC where the OPC server is running on. It is working in two ways. One way is the complete installation from a CD, including the manuals and the files which are needed. Another way is to get a single executable file e.g. from www which will be unpacked during Start.

2.2 Installation procedure

Go to the directory of the installation files. This is the root directory of your CD or the directory where the file **setup.exe** has been unpacked.

Step 1: Installation of the *iseg* OPC package and the PEAK CAN device driver

Run **.\SetupWin2000_WinXP\setup.exe**.

During the installation procedure reply to the normal questions of the InstallShield® process. Finally restart the PC.

If you have installed a non Plug-and-Play PEAK CAN hardware on your system or if you have installed the driver for a Plug-and-Play PEAK CAN hardware before the software must work properly with the PEAK CAN hardware after the restart.

If you want to install a Plug-and-Play PEAK CAN hardware on your system we suggest to proceed as follows:

The installation of the PEAK CAN hardware should be made after the setup procedure of the *iseg* OPC package because the drivers will be copied into the directory

[INSTALLDIR]\iseg\OPC\PCAN_PCI or ..\PCAN_USB on your system.

After the end of setup procedure close the OS and switch off your system.

The OS will find the new hardware and you can root under WINDOWS Hardware Wizard to this directory.

If there are any problems see manual "CAN remote ctr.pdf" part: "CAN Remote Control if connected to the PCI card or USB adapter"

Step 2: Please check whether the CAN software is installed properly

Go to the Windows "control panel" and open "CAN-Hardware"-control panel. Select with radio button the "Active device". If you have a Plug-and-Play hardware a symbol of the hardware should be displayed in the window below. Clicking on "Information" you can see, that a driver has been loaded. It depends on your hardware whether it is a non Plug-and-Play driver (for parallel port dongles and ISA PC cards) or a Plug-and-Play driver (for PCI cards, USB adapter). The serial number of this driver is shown too. The properties of this driver should remain unchanged.

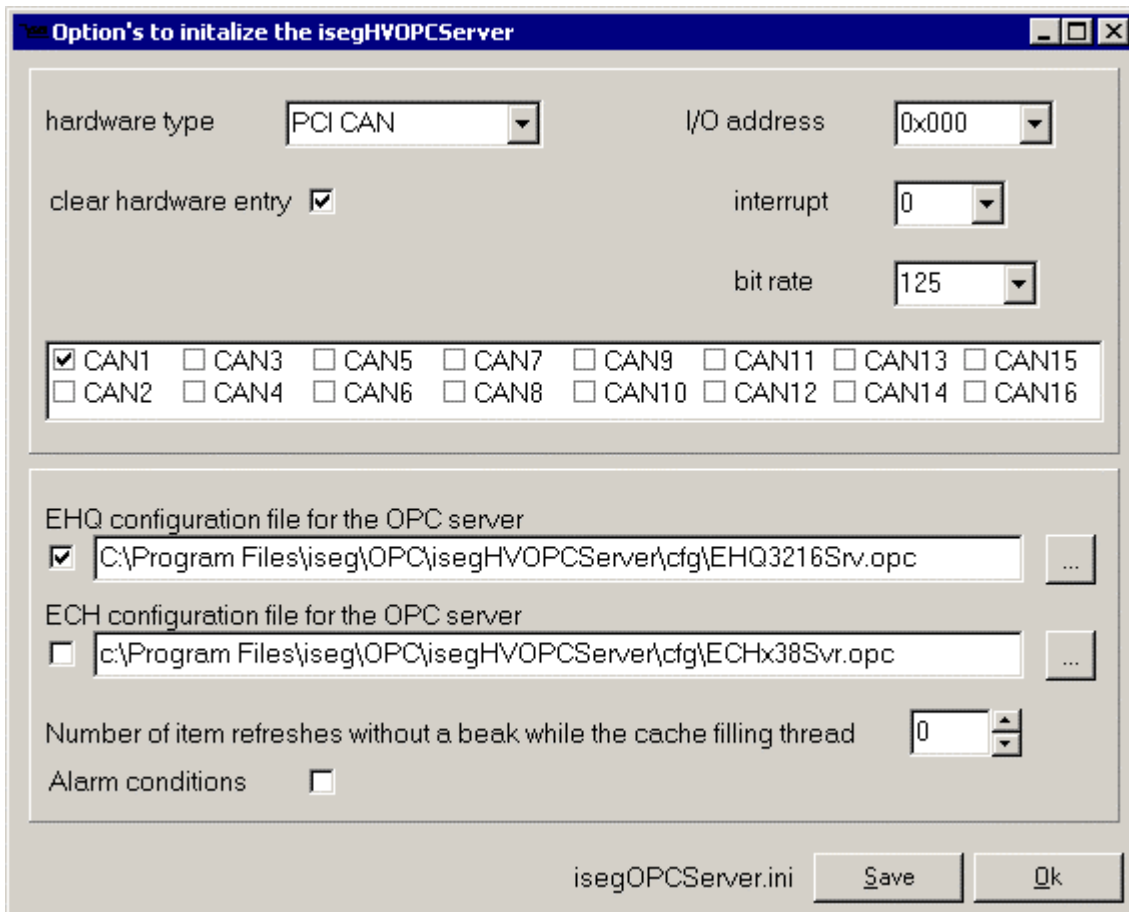
By using parallel port dongles make sure that the interrupt system of the CAN hardware is working properly. In this case go to the Windows "device manager" and look that the correct interrupt has been set. You must set the I/O properties of the LPT - see separat manual **CAN RemoteCtr.pdf**.

Step 3: Manually set up of the OPC initialization file

The OPC server is getting the information about the CAN configuration and other settings from the file **isegHVOPCServer.ini** which has been stored in the same directory like the server binary file. The hardware installation should match to the setup installation **isegHVOPCServer.ini** file.

Some more information about these files:

The initializing files have been separated into sections [CAN], [RATE] and [OPC CONFIG]. It can be changed by a graphical dialog of the **isegHVOPCcfg.exe** tool or by hand edition. We suggest to use the graphical dialog to avoid errors.



The parts of the initialization file contains following. The section [CAN] describes the CAN hardware and the section [RATE] the bit rate. The section [OPC CONFIG] describes together with the entry

“Path” the position of the OPC configuration file ***EHQ3216Srv.opc*** and ***ECHx38Svr.opc***. The entry “Calib” describes that the server must work together with the OPC calibration client and the entry **ReadSync** describes how much CAN information will be read in background of the ***isegHVOPCServer***. A zero (0) entry means no internal refresh of the cache values will be done. But the alarm handling of the DA part is active.

[CAN]

One section in this file is prepared for all types of PEAK hardware. In this section you can find entries for all kinds of hardware. Only the active entries are written without semicolons. For non Plug-and-Play hardware the actual address and interrupt number from your system must be set – see manuals of hardware.

The entry **RelnitCAN** is controlled by the graphical check box **clear hardware entry** should be true always. It means that the ***isegHVOPCServer*** is able to connect to a CAN network of another application like ***isegCANHVControl.exe***.

The entries of the **channel** have to be matched to the corresponding interface of PEAK CAN PCI card which will be used. If there is more than one CAN channel, then you can write the channel entries among each other.

[RATE]

The entry **BitRate** for the CAN bus should remain unchanged. The default value is 125 kbit/s. Please take care that all connected devices should the same bit rate.

[OPC CONFIG]

Next entry in the ini-file is the location of the OPC server configuration file. This file contains the information which modules are controlled by the OPC server. The correct path to this configuration file is very important because if incorrect the OPC server will stop immediately.

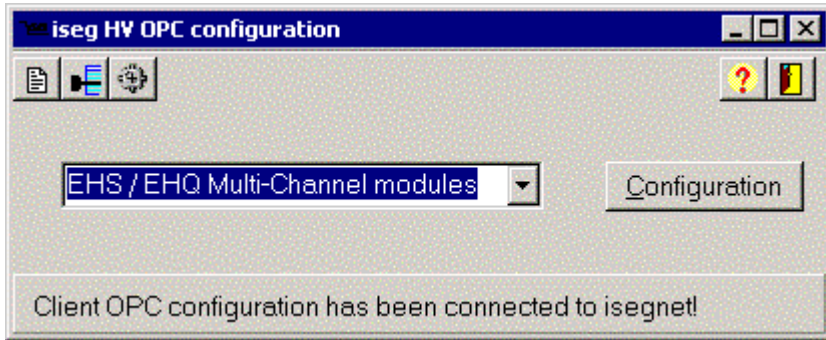
Take care that the CAN hardware is not active under further running programs (e.g the ***isegCANHVControl***).

AlarmConditions are set to false as default. If the alarm- & event server is in use then allow this entry to use the condition related events with additional namespace items of the DA.

Step 4: Create the OPC server configuration file – *EHQ3216Srv.opc* or *ECHc38Srv.opc*

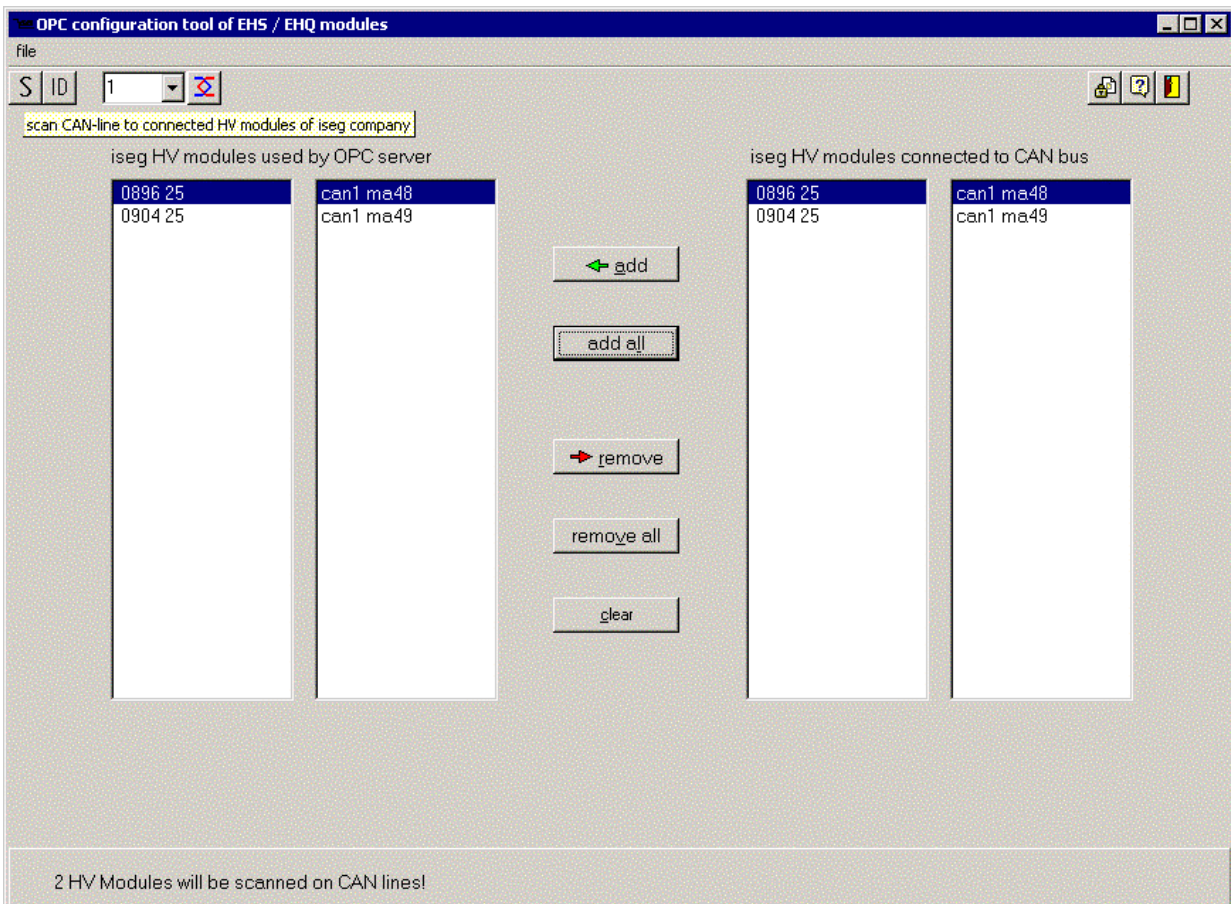
We suggest to create this file by means of our configuration tool which you can find under following folders:

Start -> Programs -> **isegOPC** -> ConfigTool {modules have to be switched on, crates can be in STDBY}



If you get the status line message “Client OPC configuration has been connected to **isegnet**” you can continue as follows:

Select what you want to configure **EHQ/EHS Multi-Channel modules** or **ECH system crates** and then push the button **Configuration**. A new dialog will be opened.



Push the button **S** in the left side of the taskbar. In the right windows the connected **iseq** HV modules or the system crates appears. The number of the scanned devices will be displayed in the status line. If you are ready with scanning push the **S** button again. Choose the devices in the right windows by pushing the button **ID**. Create with help of the buttons in the middle of the dialog your own configuration for the namespace.

Save your selected devices with help of files menu in following directories:

[INSTALLDIR]\iseg\opc\isegHVOPCServer\cfg\EHQ3216Srv.opc {modules}

[INSTALLDIR]\iseg\opc\isegHVOPCServer\cfg\ECHx38Svr.opc {crates}

Close door now, please!

Also you can find some buttons and one box in the toolbar:

button **S** to scan CAN line for connected HV modules

button **ID** to sort the modules by their identifiers

box to select another CAN channel

button to connect to the selected CAN channel

button to input a password:

Config - make visible a button to call a dialog in order to change the EHS modules between EHS or EHQ mode.

See also *3.Setup the configuration* below this chapter.

Step 5: Registration of the OPC server

Go to the OPC servers program directories. Normally the location is:

[INSTALLDIR]\iseg\OPC\isegHVOPCServer {modules}

Before you register the server, please try to start the server manually and look to the comments on the screen.

The manually start has been successful if following message is coming up:

“Attention: You will terminate the server by pushing the ‘Q’ key!”

Appears an output line: “Namespace file not found”

that means, the predefinitions in the OPC configuration file will be used only for creation of namespace.

You have to run the command file "RegisterServer.cmd" now. For unregistration use the command file UnregisterServer.cmd.

3 Set up the configuration

The configuration of the CAN hardware and the decision which HV module should be connected to the OPC server can be done and tested by the configuration tool ***iseqHVOPCcfg.exe***.

The module information is written into the file ***EHQ3216Srv.opc*** or ***ECHx38Svr.opc*** which is stored in the ***.cfg*** directory of the ***iseqHVOPCServer***. For CAN purposes there is a setup file ***can.cfg*** in the ***.cfg*** directory of the configuration tool.

There could be some error messages while running the configuration tool for the first time, because the tool is trying to register the hardware which is given in the configuration file "can.cfg". After accepting this error message a window is coming up, where the details of the hardware can be set. If you make changes save the settings, then click "ok". Close this program now and restart it again, please.