IRIS-Net Application Note 3

PCI-CAN Cards for IRIS

IRIS V2.0 now supports using a PCI-CAN bus card for the CAN network. The following interface cards from PEAK System Technik have been tested and found to work with IRIS properly:

- IPEH-002066, PCAN-PCI card, 1 CAN port, isolated

- IPEH-002067, PCAN-PCI card, 2 CAN ports, isolated

Further information can be found at the PEAK System Technik internet page www.peak-system.com

Installing and configuring a PCI-CAN card:

1. Install the CAN card properly in your PC.

2. Install the driver by running *pcandrv.exe* and other software which is supplied with the CAN card (floppy disk).

3. The installation program installs the following software via *start – programs - PCAN*:
   - Driver for the PCAN-PCI card
   - Netconfig (for CAN network configuration)
   - PCANStat (indicates the network status)
   - PCANView (for displaying the data transfer on the CAN bus)
   - PCANView Help.hlp (Help File for PCANView)

   The program *Netconfig* is needed afterwards, the other programs can be helpful for diagnostics, e. g. when telephoning with our support people.

4. After successful installation open the *Properties of CAN-Hardware* window by selecting *Start – Properties – Control Panel – CAN-Hardware*. Select *PC*I at *Active device*.

   One or two devices must appear now, e.g.

   Hardware: PEAK PCI-CAN

   Resources: card=PEAK PCI, device=11, function=0, controller=0, port=0xff1fe000, IRQ=9,
   Firmware n.a.

   Attention!

   You can only use either USB or PCI. Connection to both is not possible!

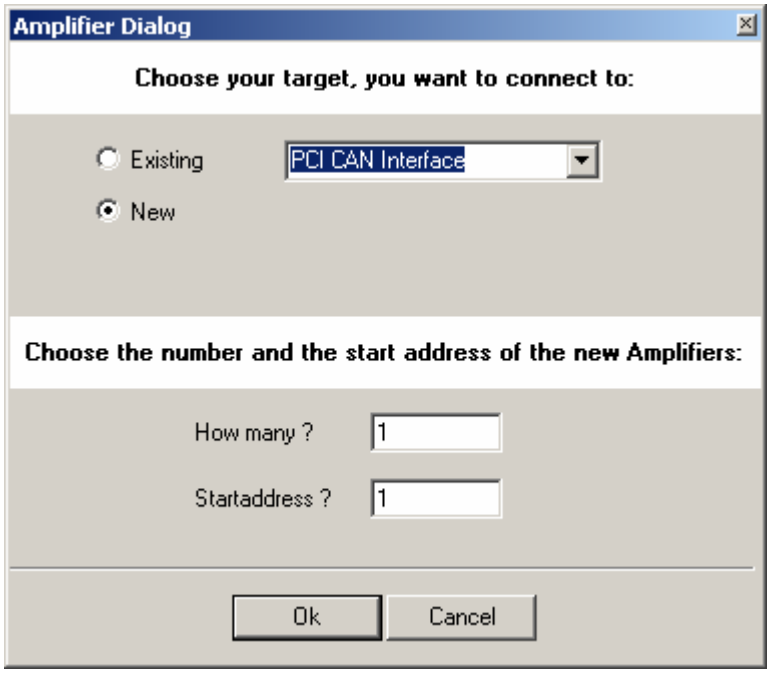
5. The cards have no internal termination resistors. Generate either a cable from SUB-D to RJ-45 and include a resistor of 120 Ohms into the SUB-D connector, or include an adapter SUB-D to 2 RJ-45 sockets and use a CAN-TERM termination plug.

   The conversion from CAN to SUB-D is as follows:

Signal	RJ-45 Connector	SUB-D 9-pin Connector
CAN_H (+)	4	7
CAN_L (-)	5	2
CAN_GND	2	3 / 6

6. After that, access the program *Netconfig* (do not start IRIS yet) and assign a network with a significant name to every controller (e.g. Controller 0 = PCC1, Controller 1 = PCC2). PCC1 / PCC2 are the IRIS default network names for the PCI-to-CAN Converter. When you exit the program, you are asked if you want to save the entries. Answer with Yes.

7. Start IRIS now and insert the first amplifier(s). In the *Amplifier Dialog* select *New* and change to *PCI CAN Interface* in the Combo-box. A CAN interface is inserted with the amplifier.



   Double-click on the interface icon to open the *PEAKCAN Local User Interface window*. In line *Net* you should read *PCC1* and the line *Hardware* should display *PEAK PCI-CAN*. If you decided in *Netconfig* to use another network name you can change it in the interface's *Properties menu*, entry *net*, opened by right-click on the interface icon.

8. If you are using a PCAN-PCI card with two CAN ports you now can add a second interface to the project. Drag a second interface either directly from *Add Device…* or insert the next amplifier(s) and select *New PCI CAN Interface* in the Combo-box again.

9. For the second interface you have to change the *net* entry to *PCC2* in the interface's *Properties* menu opened by right-click.

10. Assign the correct net for every inserted amplifier in the *Amplifier Dialog*.

Notes:

For large systems with many amplifiers it is recommended to use PCI-to-CAN interfaces instead the UCC1 USB interface. The reason for this is that the USP port has possibly to share it's bandwidth with other USB devices like mouse, keyboard, removable memory and so on.
When using two or more interfaces in an IRIS project the Online dialog opens for each interface separately when going online.