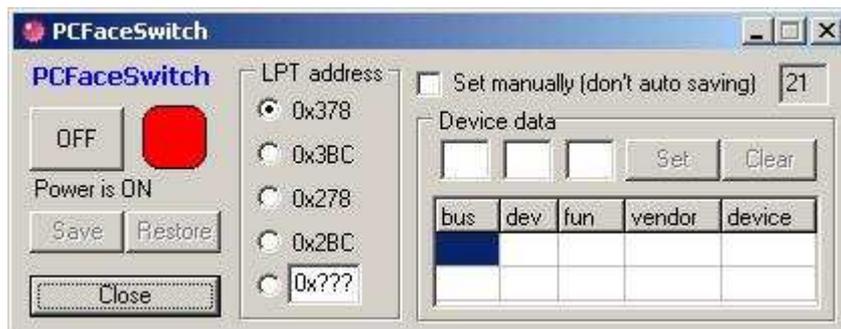


# ***PCFaceSwitch***

## **Driver and Control Program for PCI Express Bus Extender Card**

Version 1.7  
June 2013

Notes Concerning Installation, Function and Licensing



Please do not hesitate to contact us with your questions:

HK Meßsysteme GmbH

[info@pci-tools.de](mailto:info@pci-tools.de)

+

DriverFactory.de

[info@driverfactory.de](mailto:info@driverfactory.de)

## 1. Introduction

The Extender-card 'PCFace' (manufacturer: LEAP Electronic Co., Ltd) enables switching to other PCIe-cards (x1...x16 link) while the computer is running (hot-swapping). If Windows-programs want to access the PCIe-cards, cards must be configured correctly when changing.

*PCFaceSwitch* assumes this task.

*PCFaceSwitch* can be used with Windows 2000 and Windows Vista. The software includes two WDM drivers (32-bit + 64-bit) as well as a graphical control program.

## 2. Installation

### Directories

The *PCFaceSwitch* software directory contains the following 3 folders:

- app: The control program (application) with associated data.
- doc: This software documentation.
- drv: The Windows drivers and associated inf files,  
32-Bit: PCFSWDRV.SYS + PCFSWDRV.INF,  
64-Bit: PCFSWDRV64.SYS + PCFSWDRV64.INF.

### Driver Installation – Windows 2000

Please follow these steps to install the driver:

1. Open Add New Hardware Wizard (Control Panel)
2. Confirm welcome message, press "Next"
3. Choose [Add device...] option, press "Next"
4. ...Windows searches for the hardware but does not detect the extender...
5. Choose [Add new device ...] from the displayed list, press "Next"
6. Choose [No, I will select the hardware...from the list] option, press "Next"
7. Choose [Other devices] from the displayed list, press "Next"
8. Click "Have disk"
9. Browse to the *PCFaceSwitch* directory, select folder 'drv', select INF file, click "Open"
10. Confirm prompt to select disk, press "OK"
11. Select offered "PCFaceSwitch Driver", press "Next"
12. Message "hardware installation is starting", press "Next"
13. ...The driver is installed...
14. A corresponding message after the successful installation - click [Finish]
15. The device manager now lists the "Driver"

### Driver Installation – Windows XP

Please follow these steps to install the driver:

1. Open hardware Wizard (Control Panel)
2. Confirm welcome message
3. ...Windows searches for the hardware but does not detect the extender...
4. Choose [Yes, device ... already connected] option
5. Choose [Add new device ...] from the displayed list
6. Choose [Install hardware ...] option
7. Choose [Show all devices] from the displayed list
8. Click "Have disk"
9. Browse to the *PCFaceSwitch* directory, select folder, select inf file, click "Open"
10. Confirm prompt to select disk

11. Select offered "Driver"
12. Message "The device can now be installed"
13. ... The driver is installed ...
14. A corresponding message after the successful installation - click [Finish]
15. The device manager now lists the "Driver"

### Driver Installation – Windows Vista

Please follow these steps to install the driver:

(If necessary, always confirm the next step of the process!)

1. Open hardware Wizard (Control Panel)
2. Confirm welcome message
3. Choose [Install hardware...] option
4. Choose [Show all devices] from the displayed list
5. Click "Have disk"
6. Browse to the *PCFaceSwitch* directory, select folder, select inf file, click "Open"
7. Confirm prompt to select disk
8. Select offered "Driver"
9. Message "The device can now be installed"
10. ... The driver is installed ...
11. Select [install ...] option if message "The ... is not validated."
12. A corresponding message after the successful installation - click [Finish]
13. The device manager now lists the "Driver"

### Installing the Control Program

If necessary, copy the files from the folders to the desired target directory to install the control program. These are the following files:

- pcfswitch.exe: The control program itself
- pcfswitch.ini: File with the configuration settings
- bcbsmp50.bpl,  
borIndmm.dll,  
cc3250mt.dll,  
vcl50.bpl,  
vclx50.bpl: Additional binary data used by the control program

### 3. Function

#### Connection between Card and Interface Using a Parallel Cable

The full functionality of the software is only available when connecting the card with a parallel interface of the computer using a parallel cable. This cable queries the current status of the card as well as the switching on/off of the extender.

If such a connection is not established, the ON/OFF switch on the card must be used. The control program can backup and restore the configuration data.

#### PCFaceSwitch Software Configuration

The configuration portion of the control program window is opened with button 'Configure' and closed with the button 'Close'.

The last set configuration is backed up and restored the next time the program is launched.

The Port-address of the used LPT-interface is one of the configuration parameters (e.g. 0x378). The automatic/manual backup mode toggle is another. When in automatic mode, all data of all devices on the bus are saved and restored. Devices "behind" the card are set by indication the parameters. The corresponding button is used to set a device. The same button is also used to delete a set device list.

If several devices "behind the card" are being set, make sure you comply with the correct order - i.e. the first device at the card first.

An example (see screenshot):

- First device is a Bridge-Device:  
Bus 5, Dev 0, Fun 0
- Second device is a additionally  
PCIe-Device: Bus 6, Dev 4, Fun 0

Note: While in automatic mode, it is possible that accessing the configuration data of all devices causes problems. This, however, occurs rarely. Use manual mode if this is the case.



#### Using the Control Program

When a parallel cable is connected, the control program depicts the current status (ON/OFF) of the Extender-card with text ('Power is ON/OFF) as well as the color of the "lamp"(RED/GREY). Use the corresponding button to toggle the state of the card. Data are being saved and restored during this operation.

If a parallel cable is not connected, the "Save" and "Restore" buttons serve to backup PCI data before switching off and to restore PCI data after switching back on again.

ON/OFF is also possible with the context menu of the icon in the task bar (e.g. if program is minimized).

Please note:

Switching on and restoring PCI-data takes a little time (ca. 1 sec.) and devices are not immediately available for access.

## 4. Licensing

After being installed, the software initially runs with a trial license. This means the software can be used for a limited time only (usually 30 days). The functionality of the program is not restricted during this time. After some time, a message is displayed when actuating a control element of the program:

Please follow these steps to obtain an unlimited customer license:



Click on the blue text 'PCFaceSwitch' in the control program window to launch the dialog manually.

The button "Write licence file" is in the dialog. Clicking this button writes a "first" file (license1.txt) into the directory of the control program. Please send this license file (via email if possible – inf@pci-tools.de) to HKM. This license file is then converted to an unlimited customer file (if all corresponding requirements have been met) and is then returned to you.

This "second" file (license2.txt) now must be activated. The "Read licence file" button is used for this purpose. If licensing was successful, the software is now running with an unlimited customer license.

Please note: The customer license can be used only on the computer used to generate the trial license.