Quick Installation

Boards for PCI Express, PCI, CompactPCI and CompactPCI Serial bus

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Contents

Tables

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1 Driver selection

NOTICE!
Please make sure to select the appropriate driver for your application to allow for smooth operation!

1.1 Installation under Windows

1.1.1 Application-based driver selection

For new applications, drivers of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64" must be installed.

Table 1-1: Windows driver selection

Application	Target application	Target operating system	Driver type	Recommen-dation
1) New 32-bit application under Windows 32-bit or 64-bit	32-bit	Windows 32-bit/64-bit	ADDI-DATA Multi-architecture Device Drivers 32-/64-Bit for x86/AMD64	x
2) New 64-bit-application under Windows 64-bit	64-bit	Windows 64-bit	ADDI-DATA Multi-architecture Device Drivers 32-/64-Bit for x86/AMD64	x
3) Continued use of an existing 32-bit application without any changes	32-bit	Windows 32-bit	ADDI-DATA W32-Bit Driver for x86	
4) Existing 32-bit application under Windows 64-bit without a new compilation	32-bit	Windows 64-bit	Compatible DLL with ADDI-DATA Multi-architecture Device Drivers 32-/64-Bit for x86/AMD64	
5) Existing 32-bit application under Windows 64-bit, compilation necessary	32-bit	Windows 64-bit	ADDI-DATA Multi-architecture Device Drivers 32-/64-Bit for x86/AMD64	

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Application 1

An existing 32-bit application is to be upgraded for subsequent use under a Windows 64-bit operating system but should continue to run under a Windows 32-bit operating system for the time being.

- In your application, replace the API software functions of the driver of the type "ADDI-DATA W32-Bit Driver for x86" by the API software functions of the driver of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64".

Application 2

You develop a new 64-bit application for a Windows 64-bit operating system.

- Use the API software functions of the driver of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64".

Application 3

You use an existing 32-bit application, which is not to be changed, with a driver of the type "ADDI-DATA W32-Bit Driver for x86".

In this case, there is no need for any changes.

If an existing 32-bit application is to be used under a Windows 64-bit operating system, there are two possibilities:

Application 4

You want to execute your existing 32-bit application under Windows 64-bit without any changes and thus without a compilation.

- On the Windows 64-bit computer, uninstall all ADDI-DATA drivers (see Chapter 1.1.2).

> **NOTICE!**
> The directories "C:\Windows" and "C:\Windows\System32" may no longer contain any ADDI-DATA files.

The further procedure depends on the fact if the board used supports ADDIPACK 64-Bit or not. An overview of the ADDIPACK boards and functions can be found in the ADDIPACK manual, which is included in the "Manuals" folder after downloading ADDIPACK 64-Bit from our website (see option b).

NOTICE!

Please note that the synchronous interrupt mode is not available with the compatible DLL!

a) Boards without ADDIPACK 64-Bit
   (APCIe-1500*, APCIe-/CPCIs-1711, APCI-/CPCI-1500*, APCI-/CPCI-1710, APCI-/CPCI-3001, APCI-/CPCI-3120)

■ Install the corresponding driver of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64".

The compatible DLL ("APCIxxxx.dll") is automatically copied into the directory "C:\Windows\SysWOW64". Instead, it is also possible to copy the DLL into the directory of the application.

NOTICE!

With the **APCI-3001**, the compatible DLL ("APCI3001.dll") must be copied from the driver directory "Driver_[operating system]\x86" (see Chapter 2.1) into the directory of the application and be renamed ("PCI3001.dll").

b) Boards with ADDIPACK 64-Bit
   (Digital boards with ADDIPACK 64-Bit functions)

■ Install the corresponding driver of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64".

■ To download ADDIPACK 64-Bit, click on the link "ADDIPACK 64-Bit" on our website (https://addi-data.com/downloads/porting-from-32-bit-to-64-bit-application/). Save the downloaded .zip file in a directory of your choice and unpack it afterwards.

■ To install ADDIPACK 64-Bit, double-click on the "setup.exe" file in the "Program" folder.

ADDIPACK 64-Bit contains the compatible DLL ("ADDIDATA.dll"). In order to use this, you have to start the tool "Virtual Board Manager" (see ADDIPACK manual in the "Manuals" folder).

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* With this board, option b) or c) may be executed as well.

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c) Boards with the compatible DLL "ADDIDATA.dll"
   (Digital boards without ADDIPACK 64-Bit functions, analog boards, combination of
   analog and digital boards)

■ Install the corresponding driver of the type "ADDI-DATA Multiarchitecture Device
   Drivers 32-/64-Bit for x86/AMD64".

■ To download the compatible DLL, click on the link "[board name]" on our website
   (https://addi-data.com/downloads/porting-from-32-bit-to-64-bit-application/).
   Save the downloaded .zip file in a directory of your choice and unpack it
   afterwards.

■ Copy the compatible DLL ("ADDIDATA.dll") into the directory
   "C:\Windows\SysWOW64" or in the directory of the application.

Application 5

You want to execute your existing 32-bit application under Windows 64-bit with
changes.

■ In your application, replace the API software functions of the driver of the type
   "ADDI-DATA W32-Bit Driver for x86" by the API software functions of the driver
   of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for
   x86/AMD64".

1.1.2 Installation of drivers and samples

The installation and uninstallation of drivers of the type "ADDI-DATA Multi-
architecture Device Drivers 32-/64-Bit for x86/AMD64" as well as the installation of
the corresponding programming samples is described in the installation instructions
(see Chapter 3.1).

1.1.3 Windows real-time drivers (synchronous interrupt mode)

Under Windows 32-/64-bit, the ADDI-DATA PC boards can be operated in real-time
mode. For this, ADDI-DATA provides a special SDK (Software Development Kit) for a
fee.
In addition, a key for generating a digital signature is needed. This can be acquired
for a fee from a certified Microsoft partner.

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NOTICE!
The real-time driver is only supplied with the board on request.

For more information, please call our sales department at: +49 7229 1847-0.

1.2 Installation under Linux

NOTICE!
For information on Linux driver types from ADDI-DATA,
please refer to the document "Introduction to Linux drivers"
(see Chapter 3.1).

The driver model is based on two levels: the user level and the kernel level.
The source code of all drivers is included in delivery so that you can adapt the drivers
to your personal needs.

1.2.1 Standard drivers

Installation instructions for the standard drivers are to be found in a .txt file
contained in the driver package.

1.2.2 Comedi

Comedi drivers are available on request.
For more information, please call our sales department at: +49 7229 1847-0.

1.2.3 RTAI

RTAI drivers are available on request.
For more information, please call our sales department at: +49 7229 1847-0.

1.3 Installation under RTX

RTX drivers are available on request.
For more information, please call our sales department at: +49 7229 1847-0.

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2 Driver download

NOTICE!
Before using the board and in case of malfunction during operation, check if there is an update (driver, etc.) available. Current data can be found on our website or contact us directly.

2.1 ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64

ADDI-DATA drivers of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64" for ADDI-DATA PC boards can be downloaded from the website https://drivers.addi-data.com.

■ Save the downloaded .zip file in a directory of your choice and unpack it afterwards.

The driver for the board is contained in the "Driver\Driver_[operating system]" directory.

In addition to standard drivers, the .zip file includes the following software:

- Programming samples (see Chapter 1.1.2)
- API software functions (see Chapter 3.2).

On the website, under "Drivers", you can also find tools:

- Software tool "ConfigTools" to configure specific boards
- Test program "MTTTY" for serial interfaces.

2.2 ADDI-DATA W32-Bit Driver for x86

Drivers of the type "ADDI-DATA W32-Bit Driver for x86" are available on the ADDI-DATA website www.addi-data.com, under "Downloads/Drivers".

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3 Documentation

3.1 Manuals

The technical manuals for ADDI-DATA PC boards can be downloaded from the website https://drivers.addi-data.com.

NOTICE!
Before using the board and in case of malfunction during operation, check if there is an update (manual, etc.) available. Current data can be found on our website or contact us directly.

Moreover, the following documents are available on the website, under "Manuals":

• Installation instructions for drivers of the type "ADDI-DATA Multiarchitecture Device Drivers 32-/64-Bit for x86/AMD64"

• Introduction to Linux drivers

• Technical manuals for accessories (screw terminal panels, etc.)

• Safety precautions.

3.2 Standard software

The API software functions that are supported by the respective ADDI-DATA PC board are listed in an HTML document. Together with the driver for the board, this document can be downloaded from the website https://drivers.addi-data.com.

■ Save the downloaded .zip file in a directory of your choice and unpack it afterwards.

■ In the "Documentation\html" directory, double-click on the "index.html" file.

3.3 Tutorials

Instruction manuals for software such as MATLAB, DASYLab and LabVIEW are available on request.
For more information, please call our sales department at: +49 7229 1847-0.

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4 Contact and support

Do you have any questions? Write or call us:

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             Germany

Phone: +49 7229 1847-0
Fax: +49 7229 1847-222

E-mail: info@addi-data.com

Manual and software download from the Internet:

https://drivers.addi-data.com