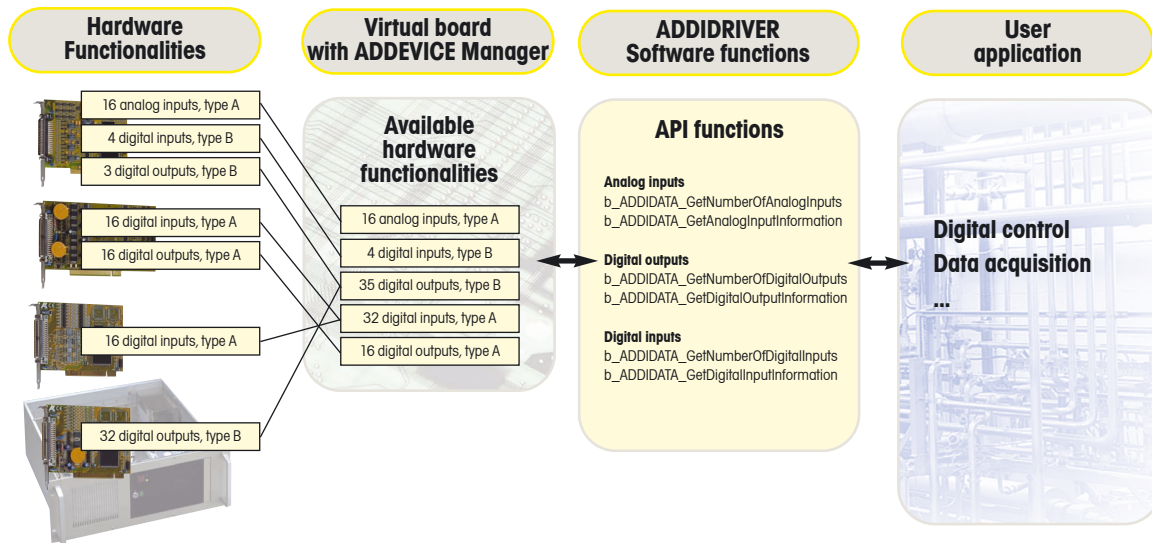


The ADDIPACK principle



New technologies for measurement and automation used efficiently – with the universal software ADDIPACK.

Up to now, to implement an application, it was necessary to install and run each board separately. When exchanging a board, a completely new installation had to be performed so that the application would suit the new component because each board was supplied with its own API (function library). Two different types of boards with the same functions were supplied with two different sets of driver functions. Why not one API for the same function?

ADDI-DATA has answered this question with a new software concept, ADDIPACK, which is now supplied with the new ADDI-DATA boards for the PCI bus (see list on page 8-9).

New software concept ADDIPACK

The ADDIPACK software contents:

- ADDIREG, a 32-bit program for Windows XP/2000/NT/98.
With this program the user can register all the hardware information required for using the ADDI-DATA boards.
- ADDIDRIVER, a driver with API functions for 32-bit control of ADDI-DATA boards.
- ADDEVICE MANAGER that manages the configuration of the virtual board.

The ADDI-DATA virtual board

The ADDIPACK software is based on the principle of a virtual board: the functions of all the ADDI-DATA boards that are installed in the system (for example digital inputs, analog outputs, timers, etc.) are interpreted as the functions of one single (virtual) board. Instead of **one** function for **each** board, ADDIPACK offers only **one** function for **all** boards with the same capability.

Example for the function "ReadDigitalInput"

Up to now: board-specific function

i_PA1000_Read1DigitalInput (...)

Syntax:

```
<Return Wert> = i_PA1000_Read1DigitalInput
                (BYTE      b_BoardHandle,
                 BYTE      b_Channel,
                 PBYTE     pb_ChannelValue)
```

New: ADDIPACK function for digital boards

b_ADDIDATA_Read1DigitalInput (...)

Syntax:

```
<Return value> = b_ADDIDATA_Read1DigitalInput
                (DWORD      dw_DriverHandle,
                 WORD       w_Channel,
                 PBYTE     pb_ChannelStatus)
```

For every hardware function, only one type of software function is installed, so the user gets a function library that can control every ADDI-DATA board.

This function library is referred to as a "virtual board", i.e. a pool of functions from which functions can be called up without directly controlling a specific board.

Dynamic management

The ADDI-DATA virtual board can be managed dynamically through the own developed **ADDEVICE MAPPER**. The user can control the number of functions and types of functions in the application. Functions like b_ADDIDATA_GetNumberOfDigitalInputs can return this information. New boards can therefore be added or exchanged, and their resources, in turn, are added or exchanged by the virtual board. When considering the application, it is not important to know from which board the resources are taken.

The link between the hardware boards and the virtual board is made through the program ADDEVICE MANAGER (included in ADDI-PACK).

Supported functionalities

The ADDIPACK software has now been used successfully for about 3 years, with almost all of the functions of the ADDI-DATA product range supported:

- Digital I/O
- Analog I/O
- Measurement of temperature, pressure, resistance and of inductive transducers measurement
- Interrupt
- Timer
- Watchdog
- Counter