



DIN EN ISO 9001:2000
certified



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Preliminary version

Technical information

Change to RoHS-compliant
communication boards

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WARNING

The following risks result from improper implementation and from use of the board contrary to the regulations:



◆ Personal injury



◆ Damage to the board, PC and peripherals



◆ Pollution of the environment

◆ **Protect yourself, the others and the environment!**

◆ **Read carefully the safety precautions (yellow leaflet).**

If this leaflet is not with the documentation, please contact us and ask for it.

◆ **Observe the instructions of the manual.**

Make sure that you do not forget or skip any step. We are not liable for damages resulting from a wrong use of the board.

◆ **Used symbols:**



IMPORTANT!

designates hints and other useful information.



WARNING!

It designates a possibly dangerous situation.

If the instructions are ignored the board, PC and/or peripheral may be destroyed.

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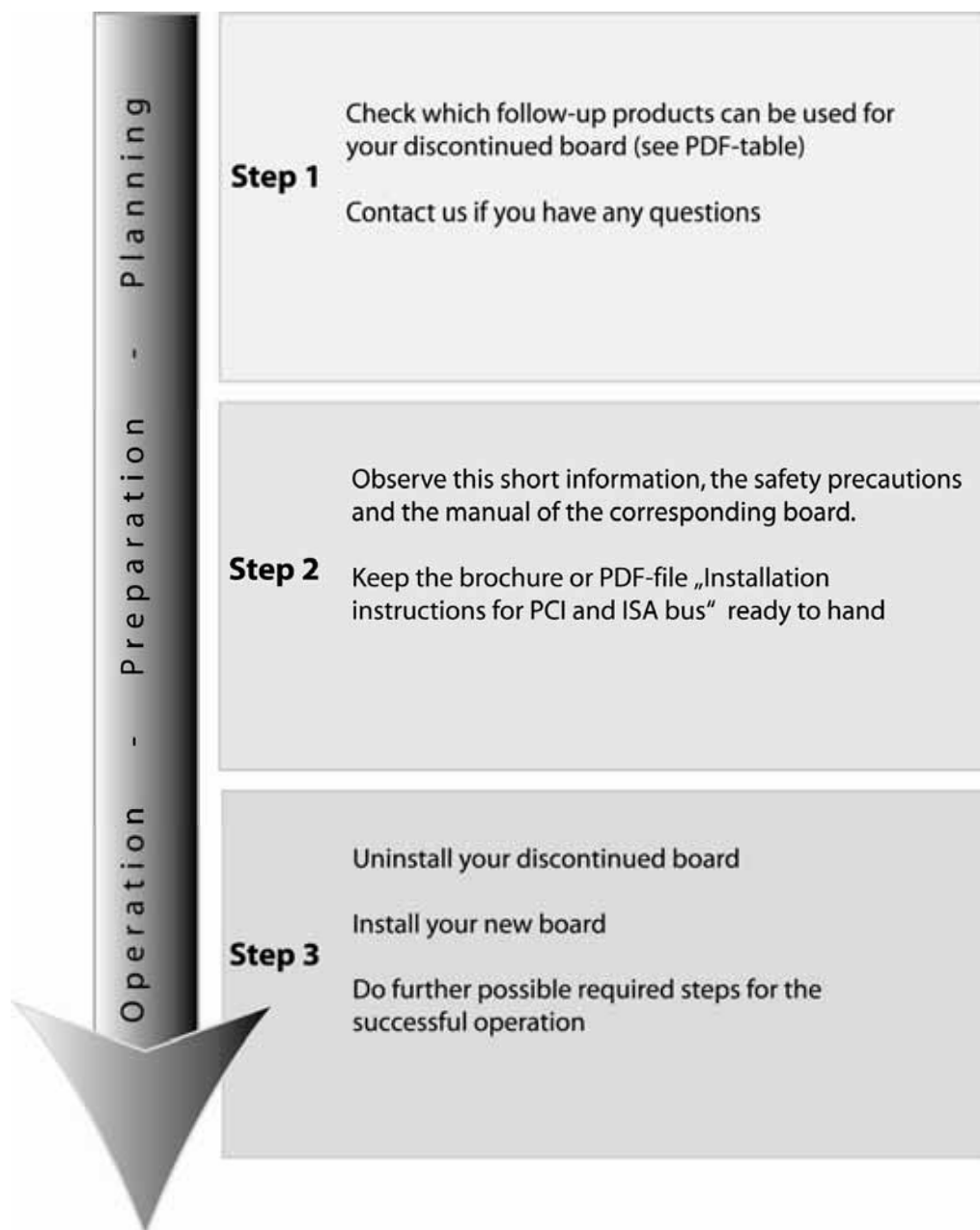
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1 OVERVIEW

Due to the RoHS-Directive (German ElektroG) several boards will not be available anymore. However, we offer follow-up products for most products (see PDF-table “Follow-up products”). In the following we want to inform you how to switch-over from the discontinued products to the new products.

There are three steps when switching to a new product – the present technical information supports you in „Step 3“.

Fig. 1-1: Overview – Change process



2 CHANGING COMMUNICATION BOARDS

You can switch all discontinued communication boards to follow-up products of the **APCI-7xxx-3**¹ series (see PDF-table “follow-up products”).

In the following chapters we will answer to the following questions:

- How do I switch over?
- What will be different during installation?
- Software compatibility?
- Function compatibility?
- Pin compatibility?

2.1 Basic steps

Table 2-1: Changing communication boards: Basic steps

Description	Further information
1. Uninstall your old board	Brochure „Installation instructions for PCI and ISA bus“ chapter 7
2. Install your new board	Brochure „Installation instructions for the PCI and ISA bus“ chapter 4 „Installing the PCI communication boards“
3. Make sure that the COM-number is configured or kept according to your requirements	Brochure „Installation instructions for the PCI and ISA bus“ chapter 4 „Installing the PCI communication boards“
4. If special quartz options are used, please make sure that the quartz setting is the same	Brochure „Installation instructions for the PCI and ISA bus“ chapter 4 „Installing the PCI communication boards“
5. Make sure that the module types (232, 422 etc.) are the same	

◆ If you install your computer by an image, please create an image-CD.

¹ APCI-7xxx-3 is the common name for the boards **APCI-7300-3**, **APCI-7420-3**, **APCI-7500-3** and **APCI-7800-3**.

2.2 Further information

2.2.1 PA 730 and PA 7300

You can switch the communication boards **PA 730** and **PA 7300** (ISA bus) to the follow-up product **APCI-7300-3** (PCI bus).

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-2: Changing the PA 730 and PA 7300: Further information

	PA730 and PA 7300	APCI-7300-3
Functionality	- ISA bus 1-port serial interface, RS232/RS422/RS485/Current Loop through jumper selection and connector assignment	- PCI bus 1-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	25-pin SUB-D male connector	9-pin SUB-D male connector
IO Mapping	8 byte I/O address space serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API driver: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 730 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.2 PA 7302

You can switch the communication board **PA 7302** (ISA bus) to the follow-up product **APCI-7300-3** (PCI bus) with the module MX485.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-3: Changing the PA 7302: Further information

	PA7302	APCI-7300-3
Functionality	- ISA bus 1-port serial interface, RS485	- PCI bus 1-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	25-pin SUB-D male connector	9-pin SUB-D male connector
IO Mapping	8 byte I/O address space 1 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 7302 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.3 PA 7303

You can switch the communication board **PA 7303** (ISA bus) to the follow-up product **APCI-7300-3** (PCI bus) with the module MX422.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-4: Changing the PA 7303: Further information

	PA7303	APCI-7300-3
Functionality	- ISA bus 1-port serial interface, RS422	- PCI bus 1-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	25-pin SUB-D male connector	9-pin SUB-D male connector
IO Mapping	8 byte I/O address space 1 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function names)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 7303 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.4 PA 732

You can switch the communication board **PA 732** (ISA bus) to the follow-up product **APCI-7300-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-5: Changing the PA 732: Further information

	PA732	APCI-7300-3
Functionality	- ISA bus 1-port serial interface, - RS485, RS232, RS422, Current Loop	- PCI bus 1-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-modules
Connector	25-pin SUB-D male connector	9-pin SUB-D male connector
IO Mapping	8 byte I/O address space 1 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function names)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 732 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.5 PA 7400

You can switch the communication board **PA 7400** (ISA bus) to the follow-up product **APCI-7420-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-6: Changing the PA 7400: Further information

	PA 7400	APCI-7420-3
Functionality	- ISA bus 2-port serial interface, - RS232/RS422/RS485/Current Loop	- PCI bus 2-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	25-pin SUB-D male connector and 9-pin male connector	2 x 9-pin SUB-D male connector
IO Mapping	16 byte I/O address space 2 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function names)	Operating system standard API drivers: Compatible User programmed drivers: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 7400 (see link in the bookmarks)	Description of the APCI-7420-3 (see link in the bookmarks)

2.2.6 PA 7420

You can switch the communication board **PA 7420** (ISA bus) to the follow-up product **APCI-7420-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-7: Changing the PA 7420: Further information

	PA 7420	APCI-7420-3
Functionality	- ISA bus 2-port serial interface, - RS232/RS422/RS485	- PCI-Bus 2-fach serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	2 x 9-pin male connector	2 x 9-pin SUB-D male connector Compatible
IO Mapping	16 byte I/O address space 2 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 7420 (see link in the bookmarks)	Description of the APCI-7420-3 (see link in the bookmarks)

2.2.7 PA 7500

You can switch the communication board **PA 7500** (ISA bus) to the follow-up product **APCI-7500-3** (PCI-bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1. After this step the boards differ from each other as follows:

Table 2-8: Changing the PA 7500: Further information

	PA 7500	APCI-7500-3
Functionality	- ISA bus 4-port serial interface, - RS232/RS422/RS485/Current Loop	- PCI bus 4-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	37-pin male connector	37-pin SUB-D male connector Compatible
IO Mapping	32 byte I/O address space 4 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 7500 (see link in the bookmarks)	Description of the APCI-7500-3 (see link in the bookmarks)

2.2.8 PA 755

You can switch the communication board **PA 755** (ISA bus) to the follow-up product **APCI-7500-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-9: Changing the PA 755: Further information

	PA 755	APCI-7500-3
Functionality	- ISA-bus 4-port serial interface	- PCI bus 4-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	37-pin male connector	37-pin SUB-D male connector Compatible With RS422 or RS485 the terminal resistance is realised by an additional cabling at the connector.
IO Mapping	32 byte I/O address space 4 x serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the PA 755 (see link in the bookmarks)	Description of the APCI-7500-3 (see link in the bookmarks)

2.2.9 APCI-7300, APCI-7300-MX, APCI-7300-2

You can switch the communication boards **APCI-7300**, **APCI-7300-MX** and **APCI-7300-2** to the follow-up product **APCI-7300-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1. After this step the boards differ from each other as follows:

Table 2-10: Changing the APCI-7300, APCI-7300-MX, APCI-7300-2: Further information

	APCI-7300, APCI-7300-MX and APCI-7300-2	APCI-7300-3
Functionality	- PCI bus 1-port serial interface,	- PCI bus 1-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	9-pin SUB-D male connector	9-pin SUB-D male connector Compatible
IO Mapping	1 x 8 byte I/O address space serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the APCI-7300 and APCI-7300-2 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.10 APCI-7420, APCI-7420-MX, APCI-7420-2

You can switch the communication boards **APCI-7420**, **APCI-7420-MX** and **APCI-7420-2** to the follow-up product **APCI-7420-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

**Table 2-11: Changing the APCI-7420, APCI-7420-MX, APCI-7420-2:
Further information**

	APCI-7420, APCI-7420-MX and APCI-7420-2	APCI-7420-3
Functionality	PCI bus 2-port serial interface, RS232, RS422, RS485	- PCI bus 2-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	2x 9-pin SUB-D male connector	2 x 9-pin SUB-D male connector Compatible
IO Mapping	2 x 8 byte I/O address space serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the APCI-7420 and APCI-7420-2 (see link in the bookmarks)	Description of the APCI-7300-3 (see link in the bookmarks)

2.2.11 APCI-7500, APCI-7500-MX, APCI-7500-2

You can switch the communication boards **APCI-7500**, **APCI-7500-MX** and **APCI-7500-2** to the follow-up product **APCI-7500-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1. After this step the boards differ from each other as follows:

Table 2-12: Changing the APCI-7500, APCI-7500-MX, APCI-7500-2: Further information

	APCI-7500, APCI-7500-MX and APCI-7500-2	APCI-7500-3
Functionality	PCI bus 4-port serial interface, RS232, RS422, RS485	- PCI bus 4-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	37-pin SUB-D male connector APCI-7500-2/4C: 4 x 9-pin SUB-D male connector	37-pin SUB-D male connector APCI-7500-3/4C: 4 x 9-pin SUB-D male connector Compatible
IO Mapping	4 x 8 byte I/O address space serial interface	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the APCI-7500 and APCI-7500-2 (see link in the bookmarks)	Description of the APCI-7500-3 (see link in the bookmarks)

2.2.12 APCI-7800

You can switch the communication board **APCI-7800** to the follow-up product **APCI-7800-3** (PCI bus) with MX-modules.

For changing please follow the basic steps as described in chapter 2.1.
After this step the boards differ from each other as follows:

Table 2-13: Changing the APCI-7800: Further information

	APCI-7800	APCI-7800-3
Functionality	PCI bus 8-port serial interface, RS232, RS422, RS485	- PCI bus 8-port serial interface - RS232/RS422/RS485/Current Loop through attachable MX-module
Connector	78-pin SUB-D female connector	78-pin SUB-D female connector
IO Mapping	8 x 8 Byte I/O address space serial interface 2 x 32-bit module recognition	128 byte serial interface 32 byte module recognition
Operating system	16- and 32-bit available	
Software compatibility (initialisation and function name)	Operating system standard API drivers: Compatible Drivers programmed by the user: Adaptation of addresses and IRQ management	
Find further information in the manual	Description of the APCI-7800 (see link in the bookmarks)	Description of the APCI-7800-3 (see link in the bookmarks)