

Overview

Products These installation instructions describe the installation of the following product: PG-1413/Windows NT

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1 Requirements

1.1 Hardware- Requirements

Computer

The product PG-1413/Windows NT can only be used on AT-compatible PCs with an ISA slot.



Please read the README.TXT file on the SIMATIC NET CD.

CP 1413

To operate the package, you require a CP 1413 SIMATIC NET communications processor. When you install the CP 1413, set its I/O range as proposed by the installation procedure. If you install several CPs, make sure that a different I/O range is set on each CP.

I/O Range

Every CP 1413 occupies four consecutive addresses of the I/O address area starting at a selectable base address. The following base addresses (hexadecimal) are available:

100, 390 and 3E0.

How to set the address (with jumper settings) is described in Chapter 5, „Appendix - Installation Instructions for the CP 1413“.

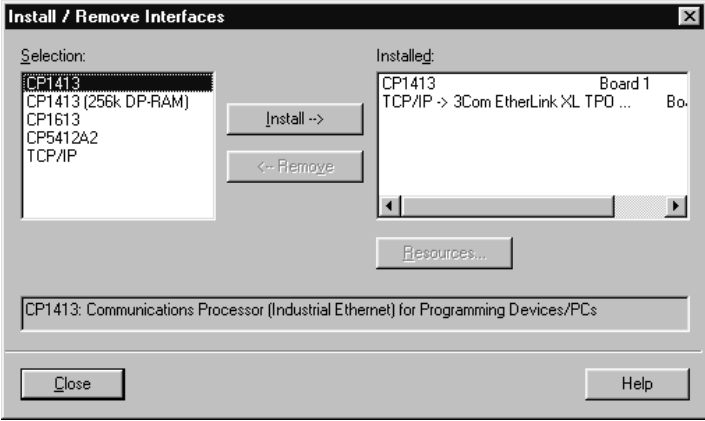
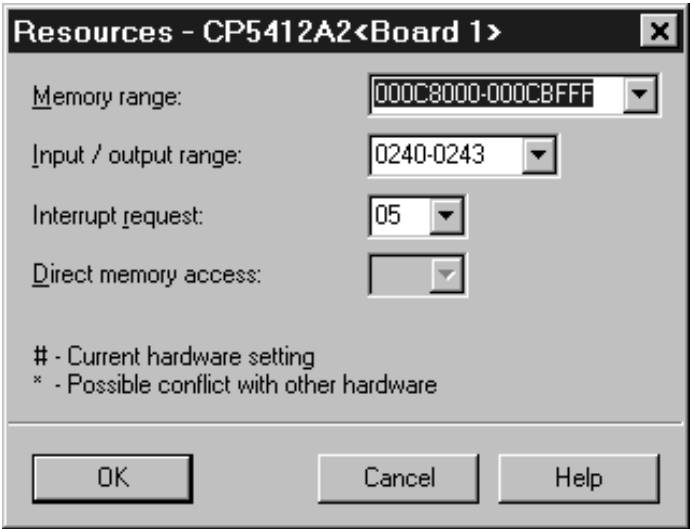
Please make sure that the I/O range you have selected is not used for any other purpose in your system.

1.2 Software- Requirements

Operating System	The product requires Windows NT version 4.0 or higher as the operating system.
Interrupt	Each CP 1413 requires one interrupt for operation. This can be set in the software. Make sure that one of the following interrupts on your system is free for the CP 1413: IRQ 5, IRQ 10, IRQ 12, IRQ 15 You should also make sure that the interrupt you selected is not being used already by other components in your system.
Dual-port RAM Address Area	Each CP 1413 occupies a DPRAM memory area of at least 64 Kbytes during operation. The location of the area is set in the configuration program. Make sure that the memory you select is not used by any other component in your system.  On some computer models with a memory configuration greater than 16 Mbytes, access to the ISA bus is only possible in areas D 0000H - D FFFFH or E 0000H - E FFFFH. You may have to change settings in the BIOS of your computer. For more information, read the BIOS description of your computer.
SIMATIC NET-CD	The program package is shipped along with other SIMATIC NET products on a CD-ROM.
Memory Requirements on the Hard Disk	During installation, the space required by the software package is displayed and the destination drive is checked to make sure there is sufficient space.

How to Configure the Hardware

Once you have started the configuration program, follow the steps outlined below:

Step	Procedure
1	Click the "Select..." button.
2	Select a CP 1413 from the "Selection:" list box.
3	Click the "Install ->" button. 
4	In the "Resources" dialog, you will see a pair of values, for example 03E0H - 03E7H for the "Input/Output Range" entry. Note down the value which you will require to set the I/O range on the CP 1413. 

Size of the Dual-Port RAM

The size of the dual-port RAM via which the PC addresses the CP 1413 can be selected in the “Set PG/PC Interface” configuration program:

Selection in the “Install..” Dialog	Dual-Port RAM Size Used
CP 1413	64 Kbytes
CP 1413 (256 Kbytes dual-port RAM)	256 Kbytes More buffer elements, suitable for extensive visualization

If the module fails to start up correctly, refer to Chapter 5.

Configuring the Software

Once you have specified the hardware parameters, you must configure the software for the CP 1413.



After hardware configuration, you automatically return to the “Access Path” tab in which you can configure the software.

Procedure for Software Configuration

Follow the steps outlined in the table below in the “Access Path” tab page:

Step	Procedure
1	Select an access point in the “Access Point of the Application” list box. If you select “<Add/Delete>”, you can also create a new access point.
2	Select a module parameter set in the “Interface parameter assignment used” list box.
3	Configure the selected module parameter set with the “Properties” button.
4	Repeat steps 1, 2 and, if necessary, step 3 for further access points.
5	Close the configuration program. • Save your assignment with OK, • Discard new assignments without saving with Cancel.



If no access point was assigned to the module, it is not possible to operate the module.

Preparing to Install the Hardware

To install the CP 1413, you require the value set during the hardware configuration for the I/O address of the CP 1413. If you did not note down the value during the hardware configuration, you can find out the value as follows:



Select the application either:

- in the SIMATIC path (taskbar **Start → Simatic → SIMATIC NET → Set PG/PC Interface**) or
- in the Control Panel of Windows NT (taskbar **Start → Settings → Control Panel → Set PG/PC Interface**).



Click the "Select..." button.



Select the module you want to install from the "Installed:" list and click the "Resource" button.



Under the input/output range you will see a pair of values, for example 03E0H - 03E7H. Note the values which you require for setting the I/O range of the CP 1413.

Installing the Hardware

To install the CP 1413 you require the values for the I/O range of the module during hardware configuration.



Read the installation instructions for the CP 1413 in the appendix. (Chapter 5).



Set the proposed I/O range on the CP 1413 and install the module as described in the instructions.

Starting the Driver

When you reboot your system, the protocols you have activated are started automatically.

Restarting and Resetting a Module

Restarting and resetting a module in the "Mode" tab is only possible when a module parameter set is active. After quitting the configuration program, the last selected module parameter set is activated when you restart the configuration program.



The following entry in "Interface Parameter Set Used" must not be selected:

"ISO Ind. Ethernet → SIMATIC NET NDIS-Ether"-

5 Appendix - Installation Instructions for the CP 1413

Hardware Requirements

The CP 1413 is a card for IBM AT-compatible PCs/PGs and requires a 16-bit ISA slot for operation.



When installing the module, make sure you adhere to the guidelines for avoiding charges on electrostatically sensitive devices (ESD).



Make sure that the power to the PC/PG is switched off before opening the casing or inserting or removing the module.



Before installing the module, read the chapter “Installing Modules” (or similar title) in the manual describing your PC/PG and follow the instructions.

Configuration Register

Using the configuration register all the values required for operating the module are loaded on the CP by the software. the configuration register occupies four addresses in the I/O area of the PC. The 8 occupied addresses are set using jumpers. Fig. 5.1 shows the position of the jumpers on the module.

Layout of the CP 1413

The following diagram shows the layout of the CP 1413 and the location of the jumpers for setting the I/O range.

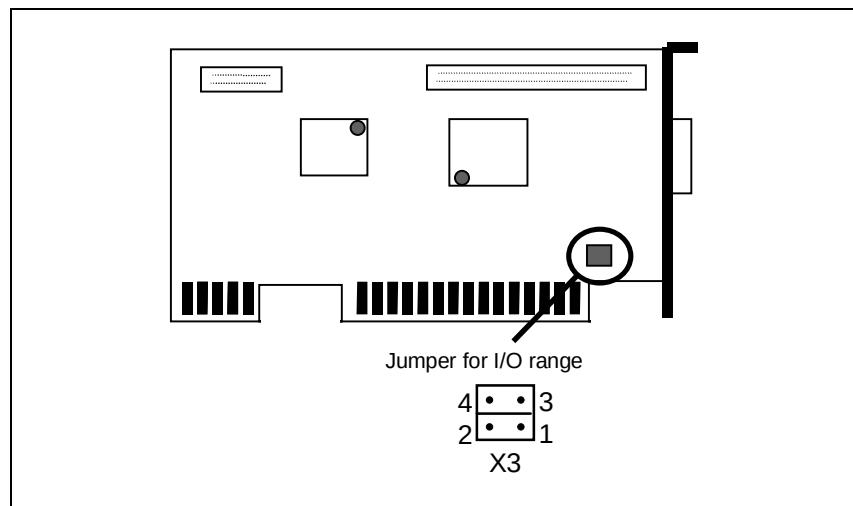


Fig. 5.1 Layout of the CP 1413

Setting the Jumper The following table shows the possible jumper settings on the CP 1413. In the standard setting, both jumpers are plugged in.

I/O Address Range (hex)	X3 / 1-2	X3 / 3-4
03E0-03E7		
0390-0397		○ ○
0100-0107	○ ○	○ ○



The selected I/O range must not be used by any other card.

Further Requirements

To operate the software, a free memory area of at least 64 Kbytes is required. If the start address is higher than 1 Mbyte, 256 Kbytes are required.

The CP 1413 occupies one of the following interrupts:

Possible Interrupt Numbers	5	10	12	15
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These settings are first made when you install the software and are explained in detail in the section dealing with software installation.

The following table shows the default interrupt assignment of a computer:

Interrupt	Belegung
IRQ 5	Sound card , MPI cards
IRQ 10	Network adapters, SCSI controller
IRQ 12	PS2 mouse
IRQ 15	Hard disk controller, SCSI controller

If all the possible interrupts are being used by the hardware listed above, you will have to reassign hardware components (driver software of the manufacturers) or remove unnecessary hardware or disable it in the BIOS.

5.1 Problems Assigning Hardware Resources

If you see error messages displayed when you restart the module or the computer, you have the following diagnostic tools available:

- Event Viewer in Windows NT
- Windows NT Diagnostics (**Start → Programs → Administrative Tools (Common) → Windows NT Diagnostics**)
- Message from the PG/PC interface
- Checking the BIOS settings

Event Viewer in Windows NT:



You can display the event viewer of Windows NT by navigating **Start → Programs → Administrative Tools (Common) → Event Viewer**

Activate the System view in the Log menu.



The event viewer displays the last system messages. In the Source column, you will see the CP1413/CP5412. To obtain a detailed text, double-click the required row.



A message similar to the one shown below should be displayed in the event detail. If this message does not appear, change the memory and then run a cold restart on the computer.