Operating Instructions Edition 07/2006

Industrial PC

Panel PC 677

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Operating instructions

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Safety Guidelines

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

Danger

indicates that death or severe personal injury **will** result if proper precautions are not taken.

Warning

indicates that death or severe personal injury **may** result if proper precautions are not taken.

Caution

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

Caution

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

Notice

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Prescribed Usage

Note the following:

Warning

This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Foreword

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1.1 Overview

Purpose of this manual

These operating instructions contain all the information you need for commissioning and using the SIMATIC Panel PC 677.

It is intended both for programming and testing personnel who commission the device and connect it with other units (automation systems, programming devices), as well as for service and maintenance personnel who install add-ons or carry out fault/error analyses.

Basic knowledge required

A solid background in personal computers and Microsoft operating systems is required to understand this manual. General knowledge in the field of automation control engineering is recommended.

Scope of this manual

This manual applies to devices with order numbers 6AV780.…

Approvals

For more information, please refer to the chapter "Certificates and Guidelines" in the appendix.

CE marking

For more information, please refer to "Directives and Declarations" in the "Certificates and Guidelines" section of the appendix.

Standards

Please refer to sections "Application planning" and "Technical data".

Position in the information landscape

The documentation for the Panel PC includes the following sections:

- SIMATIC Panel PC 677, Operating Instructions (compact) with the following information:
  - Commissioning
  - Legal information
- SIMATIC Panel PC 677, Operating Instructions

The documentation is supplied with the Panel PC in electronic form as a PDF file on the "Documentation and Drivers" CD. The documentation is available in German, English, French, Italian and Spanish.

Additional information about the Windows operating system is available in the Internet at the Microsoft homepage, "http://www.microsoft.com".

Conventions

The following text notation will facilitate reading this manual:

Representation	Validity
"File"	• Terminology that occurs in the user interface, e.g., dialog names, tabs, buttons, menu commands • Required parameters such as limit values, tag values • Path information
"File > Edit"	Operational sequences, e.g., menu commands/shortcut menu commands.
<F1>, <Shift>+<F1>	Keys and key combinations

The term "Panel PC 677", "control unit" and "computer unit" is uniformly referred to as the "device" in these operating instructions. The full term is only used when a concrete reference is necessary.

Note

A note is important information about the product, handling the product or a reference to specific sections of the documentation that require special consideration.

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SIMATIC WinCC®
SIMATIC WinCC flexible®
Panel PC 677®

Safety information

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2.1 Safety information

Warning

Emergencies

In the event of a device fault, interrupt the power supply immediately. Inform the customer service personnel responsible. Malfunctions can occur when the operator controls or power cable are damaged or when liquids or foreign objects penetrate the device.

Warning

Following the results of a risk analysis, additional protection equipment on the machine or the system is necessary to avoid endangering persons. With this, especially the programming, configuration and wiring of the inserted I/O modules have to be executed, in accordance with the necessary risk analysis identified safety performance (SIL, PL or Cat.). The intended use of the device has to be ensured.

The proper use of the device has to be verified with a function test on the system. With this programming, configuration and wiring errors can be identified. The test results have to be documented and if necessary inserted into the relevant inputs.

Note

This device corresponds to the regulations of the EU low-voltage directive and the GPSG, verified by conformity with national and international standards (DIN EN, IEC) by a UL approval (cULuc). Please comply with all the information in these operating instructions when assembling the device.

Electrical connection

Warning

Disconnect the device from the mains before every intervention.

Do not touch power lines or data transmission lines during electrical storms and do not connect any cables.

System expansions

Only install system expansion devices designed for this device. If you install other expansions, you may damage the system or violate the safety requirements and regulations for radio frequency interference suppression. Contact your technical support team or where you purchased your PC to find out which system expansion devices may safely be installed.

Caution

If you install or exchange system expansions and damage your device, the warranty becomes void.

High frequency radiation

Caution

Unintentional operating situations

High frequency radiation, e.g. from cell phones, can cause unintentional operating situations under some circumstances. Further information is available in the section "EMC requirements" of the "Technical data" chapter.

Handling and disposal of lithium batteries

Warning

Danger of explosion and the release of harmful substances!

Do not throw lithium batteries into fire, do not solder onto the cell body, do not open, do not short circuit, do not reverse pole, do not heat above 100 °C, dispose of according to regulations, and protect from direct sunlight, moisture and condensation.

Replace lithium batteries with the same brand or a brand recommended by the manufacturer.

Dispose of used lithium batteries as hazardous waste, individually, in accordance with the local regulations.

Repairs

Only authorized personnel are permitted to repair the device.

Warning

Unauthorized opening of and improper repairs to the device may result in substantial damage to equipment or endanger the user.

2.2 General information

Overview

Caution

The device is approved for operation in closed rooms only. The guarantee is void if this stipulation is ignored.

Avoid extreme environmental operating conditions. Protect your device against dust, moisture and heat. For additional information, refer to the Technical data.

Do not place the device in direct sunlight.

Transport

Unpack the device at its installation location. Transport the device only in the original packaging. Do not transport the device when it is mounted.

Notice

Adhere to these stipulations each time the device is transported, otherwise the guarantee is void.

Caution

Condensation
When transporting the device at low temperatures, ensure that no moisture gets on or into the device. This also applies if the device is subjected to extreme changes in temperature.

Commissioning
Allow the device to slowly adjust to room temperature before commissioning the device. Do no place the device near heat radiation. If moisture condensation occurs, wait at least 12 hours before you switch on the device.

Vibration
Optical drives are sensitive to vibration. Inadmissible vibration during operation may result in loss of data or damage to the drive or data medium.

Before transporting the device, wait at least 20 seconds to allow the drive to stop completely.

Tools & downloads

Please check regularly if updates and hotfixes are available for download to your device.

Downloads are available on the Internet at http://www.siemens.com/asis under "Support". Click on "Software Tools & Downloads" on "Overview Panel PCs" Using the global search function, you can then also search for any downloads you require.

Processor and optical drive

Notice

An optical drive should only be operated in a mechanically undisturbed environment without vibrations and shock.

Safety-relevant applications

Warning

Maloperation

Do not perform safety-relevant functions of the user software with the touch screen.

Chemical stability

Caution

Adhere to the information regarding chemical resistance of the panel front. Please go to http://www.siemens.com/asis under "Tools & Downloads" for more information. Enter the article ID 16532108 as the search term. The available articles are displayed.

Sources of light

Notice

Position the screen so that it is not subject to direct sunlight or other strong sources of light.

Defective pixels in the display

At present, the manufacturing process of modern displays does not guarantee that all pixels of the display will be perfect. A small number of defective pixels in the display is therefore unavoidable. This does not present a functional problem as long as the defective pixels are not bunched in one location.

Further information is available in the section "General technical data" of the "Technical data" chapter.

Burn-in dffect on TFT displays

A permanent picture with bright images can lead to a burn-in effect on the TFT LCD.

If a screen saver is activated, please observe the following:

- The liquid crystals in screen savers which actuate active black when the backlighting is on, e.g. flying stars "starfield simulation," renew themselves. Pay attention to the length of time the backlighting is activated
- The following applies to screen savers which turn off the the backlighting: Each time the backlighting is turned on, its life is reduced by 50 minutes.

Consider the following carefully:

- Screen saver
- Switch off the backlighting regularly
- Permanent display of the customer application

Description

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3.1 Design

Design

Figure 3-1 Panel PC 677

1 Computer unit
2 Control unit

Brief description

The device is available with different control units which are distinguished by the size of the display and by the membrane keyboard or touch screen.

Keyboard variants

- Color display with backlighting:
  - 12" TFT technology with 800 x 600 resolution
  - 15" TFT technology with 1024 x 768 resolution
- Membrane keyboard with alphanumeric keys, numeric keys, cursor keys and control keys
- Function keys and softkeys
- Integrated mouse
- LEDs for power supply, temperature, softkeys, <Shift> and <ACK> function keys and buttons
- Front-mounted USB 2.0 interface for connecting external I/O devices. All fronts are also available without USB interfaces accessible from the front

Touch screen variants

- Color display with backlighting
  - 12" TFT technology; 800 x 600 resolution
  - 15" TFT technology; 1024 x 768 resolution
  - 19" TFT technology; 1280 x 1024 resolution
- LEDs for power supply and temperature
- Front-mounted USB 2.0 interface for connecting external I/O devices. All fronts are also available without USB interfaces accessible from the front

For additional information, refer to the Technical data.

3.2 Technical features

General features	
Installation design	Panel-mounting device
Graphic	Part of the graphic memory is dynamically occupied in the system memory • VGA: 1600 x 1200 pixels, 85 Hz, 32-bit colors • DVI-I: 1600 x 1200 pixels, 60 Hz, 32-bit colors • LCD: 1280 x 1024 pixels, 18-bit color depth
Interfaces	
PROFIBUS/MPI	On board, 12 Mbps, electrically isolated, CP 5611-compatible
Ethernet	2x 10/100 Mbps, RJ45
USB	External: 4x USB 2.0 high current: A maximum of 2 USB interfaces can be operated simultaneously as high current interfaces.
COM	Serial interface V.24, 9-pin
Slots for add-ons	1x PCI 265 mm long 1x PCI 175 mm long
Compact Flash Card	512 MB, 1 GB and 2 GB
Monitor	1 x DVI-I, interface for connecting an additional monitor

Configuration options	
Power supply	• 100 - 240 V AC, autorange • DC 24 V, optional Both with bridging for short-time voltage failures as per NAMUR: maximum of 20 ms at 0.85 x V_{rated} (V_{rated} = rated voltage)
Processor	• Intel ® Celeron M 370, 1.5 GHz, 400 MHz Front Side Bus FSB, 1024 KB 2nd Level Cache • Intel ® Pentium M 730, 1.6 GHz 533 MHz Front Side Bus FSB, 2048 KB 2nd Level Cache • Intel ® Pentium M 760, 2.0 GHz 533 MHz Front Side Bus FSB, 2048 KB 2nd Level Cache
Main memory	2-socket SDRAM DDR2: 256 MB, 512 MB, 1 GB expandable up to 2 GB
Hard disk drives	• 1 x 3.5" hard disk Serial ATA, ≥ 40 GB • 1 x 3.5" hard disk Serial ATA, ≥ 80 GB • 2 x 2.5" hard disks, ≥ 60 GByte (RAID1 system configurable in BIOS; RAID controller onboard)
Disk drive	• Without • DVD-ROM • CD-RW/DVD drive
Operating system	Without Preinstalled, also provided on the Restore DVD and Microsoft Recovery CD • Windows 2000 Professional MUI* • Windows XP Professional MUI* *MUI: Multi-lingual user interface; German, English, French, Italian, Spanish, Japanese, Korean, Chinese simplified and Chinese traditional