MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official pages for procurement and maintenance review

PRODUCT BRAND

Siemens

PRODUCT MODEL

6ES7647-6CH30-0AB0

SIMATIC IPC627C configured industrial Box PC. Relevant section pages: 16, 17. Adjacent model text on shared pages is outside this product reference.

OFFICIAL SOURCE

SIMATIC IPC627C Operating Instructions; 09/2011, A5E02669068-03

Siemens original documentation and product reference

IPC627C family reference only. Optional power, storage and other configurations in these original tables do not identify the CH30 order contents. Not an installation guide.

AMIKON PRODUCT SUPPORT

+86-18020776786 INFO@AMIKON.CN

AMIKONG.COM

Amikon Limited prepared this independent reference package. Selected manufacturer pages follow with their original content and pagination visible.

Legal information

Warning notice system

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 relevant 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 product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

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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.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG
GERMANY

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Introduction 1

1.1 Preface

Purpose of this document

These operating instructions contain all the information you need for commissioning and operation of the SIMATIC IPC627C.

It is intended both for programming and testing personnel who commission the device and connect it with other units (automation systems, additional programming devices), as well as for service and maintenance personnel who install expansions 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 validity of this document

This documentation applies to all variants of the SIMATIC IPC627C and relates to devices supplied as of September 2011.

Its place in the information landscape

The documentation for the SIMATIC IPC627C includes the following sections:

- SIMATIC IPC627C, Getting Started
- SIMATIC IPC627C, Operating Instructions

The documentation is supplied in German,English, French, Spanish, Italian, Japanese and Chinese with the device in electronic form as a PDF file on the "Documentation and Drivers" DVD.

For further instructions on how to handle the software, please refer to the corresponding manuals.

Conventions

The term "Box PC" or "device" is sometimes used to refer to the SIMATIC IPC627C product in this documentation. The abbreviation "CP" stands for CP 1616 onboard.

History

Currently released versions of these operating instructions:

Safety notes

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2.1 General safety instructions

⚠ CAUTION
Please observe the safety instructions on the back of the cover sheet of this documentation. You should not expand your device unless you have read the relevant safety instructions.

This device is compliant with the relevant safety measures to IEC, EN, VDE, UL, and CSA. If you have questions about the validity of the installation in the planned environment, please contact your service representative.

Repairs

Only authorized personnel are permitted to repair the device.

⚠ WARNING
Unauthorized opening and improper repairs can cause considerable damage to property or danger for the user.

System expansion devices

Only install system expansion devices designed for this device. The installation of other expansions can damage the system and violate the radio-interference suppression regulations. 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.

Battery

This device is equipped with a Lithium battery. Batteries may only be replaced by qualified personnel.

⚠ CAUTION

There is the risk of an explosion if the battery is not replaced as directed. Replace only with the same type or with an equivalent type recommended by the manufacturer. Dispose of used batteries in accordance with local regulations.

⚠ WARNING

Risk of explosion and release of harmful substances!

Do not burn lithium batteries, do not solder or open the cell body, do not short-circuit or reverse polarity, do not heat to above 100°C. Dispose of in accordance with regulations, keep out of direct sunlight, and protect from moisture and condensation.

ESD guidelines

Modules containing electrostatic sensitive devices (ESDs) can be identified by the following label:



Strictly follow the guidelines mentioned below when handling modules which are sensitive to ESD:

- Always discharge your static electricity before handling modules which are sensitive to ESD (for example, by touching a grounded object).
- All devices and tools must be free of static charge.
- Always pull the mains connector and disconnect the battery before you install or remove modules which are sensitive to ESD.
- Handle modules fitted with ESDs by their edges only.
- Do not touch any wiring posts or conductors on modules containing ESDs.

Basic data	
Graphics	• Intel® HD graphics controller, chip set integrated 2-D and 3-D engine, Dynamic Video Memory Technology (uses up to 256 MB RAM) • CRT: Max. 1280x1024 at 100 Hz / 32-bit color depth Max. 1600x1200 at 60 Hz / 32-bit color depth Maximum resolution: 2038x1536 at 75 Hz / 16-bit color depth • LCD via DVI-I: 1600x1200 at 60 Hz / 32-bit color depth
Power supply	• 100 - 240 VAC, 190 W; wide range • 24 V DC, 210 W Both with bridging of transient loss of voltage according to NAMUR: max. 20 ms. The 24V DC power supply is protected against reversed polarity.
Drives and storage media	
Mass storage	• 1 x 3.5" hard disk or • 2 x 2.5" hard disk or RAID1 system Capacity see order forms
DVD drive	DVD burner
Flash memory	• Slot for Compact Flash card • 1 x solid-state drive
Interfaces	
Ethernet	2x 10/100/1000 Mbps (RJ45)
PROFIBUS/MPI	12 Mbps (isolated potential, compatible to CP 5611), optional
PROFINET	10/100 Mbps (CP 1616 onboard), three RJ45; optional
USB	• External: 4 x USB 2.0 high current (max. 2 can be simultaneously operated as high current) • Internal: 1 x USB 2.0 high current + 1x USB 2.0 low current on a 10-pin male connector, 1 x USB 2.0 low current for internal USB stick/dongle • Front panel port: 1 x USB 1.1, 1 x USB 2.0, both high current
COM	Serial V.24 port
Monitor	1x DVI-I (VGA monitors can be connected with a DVI/VGA adapter that is available as an accessory)

Monitoring and safety functions	
Temperature	• When permitted temperature range is exceeded • Warning messages from application program that can be analyzed: local (DiagBase), via LAN (DiagMonitor, optionally available)
Fans	• Failure of device and power supply fans • Warning messages from application program that can be analyzed: local (DiagBase), via LAN (DiagMonitor, optionally available)
Watchdog	• Monitoring function for program execution • Restart can be parameterized in the event of a fault • Warning messages from application program that can be analyzed: local (DiagBase), via LAN (DiagMonitor, optionally available)
LED display	2 LEDs for displaying system status that can be programmed by the user[1]
Transient voltage interruption	Up to 20 ms buffer time with full load
Buffer memory (optional)	2 MB battery-buffered SRAM [1) 2)]

[1)] The DMAPI programming interface is available to activate the LEDs and the SRAM [2)]. You will find this in the folder "C:\Program Files\Siemens\DiagnosticManagement\DMAPI".

[2)] only with devices with PROFIBUS or PROFINET interface

Optional accessories (Box PC only)	
Vertical mounting brackets	For space-saving installation of the Box PC in the control cabinet, ports facing up/down or forward
Graphics adapter	
• DVI-I to VGA adapter	Used to connect a monitor with a VGA port to the Box PC
• DVI-I to VGA and DVI Y-adapter (dual display)	Used to connect two monitors to the Box PC