SIEMENS

SIMATIC industrial PC

PC – PROFINET IRT CP 1625 / CP 1625Dev

Operating Instructions

01/2023
A5E43075902-AC

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

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

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

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

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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A5E43075902-AC
Ⓟ 01/2023 Subject to change

Preface

The CPs 1625 are PCIe expansion boards for SIMATIC IPCs. The cards have two LAN interfaces.
The development board CP 1625Dev is specifically offered for customer-specific PROFINET IRT interfaces.

Delivery variants

The following table shows the different delivery variants:

Designation	Description	MLFB
CP 1625	1 x PN IRT PCIe interface with 2 ports	6ES7648-2CF10-1AA0
CP 1625Dev	1 x PN IRT PCIe SOC1 Developer Board with 2 ports	6ES7648-2CF10-1BA0

Scope of validity of the documentation

This documentation is valid for the following products:

- CP 1625
- CP 1625Dev

Conventions

"CP 1625Dev" means that the section applies **only** to the "CP 1625Dev".
"CP 1625" includes the "CP 1625" and the "CP 1625Dev".

Notes

Please also observe notes marked as follows:

NOTE

Notes contain important information on the product, handling the product or on part of the documentation to which you should pay particular attention.

Trademarks

The following names identified by ® and possibly some names without this identifier are registered trademarks of Siemens AG:
SIMATIC NET, HARDNET, SOFTNET, CP 1612, CP 1613, CP 1625, CP 5612, CP 5613, CP 5614, CP 5622

Content of this documentation

These operating instructions contain information on the installation of the communications processor CP 1625.

You can find additional information here:

- TIA Portal documentation
- Software Controller

You can find additional information on using the CP 1625 for development purposes here:

- PROFINET Driver Commissioning Manual (https://support.industry.siemens.com/cs/ww/de/view/86655396/en)

Updated operating instructions on the Internet

You will find the current version of these operating instructions on the Product Support (https://support.industry.siemens.com/cs/ww/en/view/109756564) Internet pages

Further documentation

The documents listed below contain more detailed information on commissioning and using the communications processors. You will find this documentation on the Product Support pages on the Internet.

- **NET Industrial Ethernet/PROFINET System Manual**
  You will find detailed information on the structure of an industrial Ethernet network in this document.
  Entry ID: (https://support.industry.siemens.com/cs/ww/en/view/27069465)
- **SIMATIC PROFINET System Description Manual**
  This provides you with basic knowledge of the following PROFINET IO topics: Network components, data exchange and communication, PROFINET IO, component-based automation, application example of PROFINET IO and component-based automation.
  Entry ID: (https://support.industry.siemens.com/cs/ww/en/view/19292127)
- **From PROFIBUS DP to PROFINET IO Manual**
  Read this document if you want to transfer an installed PROFIBUS system to a PROFINET system.
  Entry ID: (https://support.industry.siemens.com/cs/ww/en/view/19289930)

Specialist terms

You will find explanations of many specialist terms that are used in this documentation in the SIMATIC NET glossary.
Entry ID: (http://support.automation.siemens.com/WW/view/en/50305045)

Siemens Industry Online Support

You can find current information on the following topics quickly and easily here:

- **Product support**
  All the information and extensive know-how on your product, technical specifications, FAQs, certificates, downloads, and manuals.
- **Application examples**
  Tools and examples to solve your automation tasks – as well as function blocks, performance information and videos.
- **Services**
  Information about Industry Services, Field Services, Technical Support, spare parts and training offers.
- **Forums**
  For answers and solutions concerning automation technology.
- **mySupport**
  Your personal working area in Industry Online Support for messages, support queries, and configurable documents.

This information is provided by the Siemens Industry Online Support in the Internet (http://www.siemens.com/automation/service&support).

Table of contents

Safety information

1

1.1 General safety instructions

Repairs

⚠ WARNING
Damage to the device Incorrectly performed repairs may result in substantial damage to equipment or endanger the user. Only authorized personnel are permitted to repair the device.

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:

- Before working with modules with ESD, you need to ensure that you are free of electrostatic charge (e.g. 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 installing or removing modules which are sensitive to ESD.
- Handle modules fitted with ESDs only by their edges.
- Do not touch any connector pins or conductors on modules containing ESDs.

1.2 Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit (https://www.siemens.com/industrialsecurity).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customers' exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under (https://www.siemens.com/industrialsecurity).

Product overview

2

Principle

The following table provides an overview of the components of the CP 1625 and CP 1625Dev:

Components	CP 1625	CP 1625Dev
Strain relief	x	x
Adhesive feet - 4 units	-	x
Terminal block for 24 V DC power supply	-	x
Advanced interface configuration • X500: UART0 • X501: UART1 • X602: Interface for PROFINET certification • X2200: Jumper for selecting boot source • X1600: Jumper for selecting restart behavior • X2000: Jumper for selecting power supply source	-	x

NOTE

If the consignment is incomplete, contact your supplier or your local Siemens office.

2.1 Hardware and software requirements

Hardware requirement

The CP 1625 requires a short PCIe slot with master capabilities for operation.

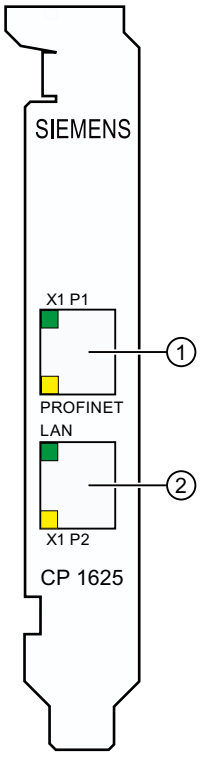
Software requirement

The CP 1625 requires additional software for operation, e.g. CPU 1507S or a dedicated SDK.

2.2 View of front panel

Connection elements

The following figure shows the front panel of the communications processor CP 1625:



① Port 1 of the X1 interface
② Port 2 of the X1 interface

RJ45 sockets

The connection of the CP 1625 to the LAN (**L**ocal **A**rea **N**etwork) is made via one of the two RJ45 sockets on the front panel of the communications processor.
The two sockets lead to the integrated real-time switch.

NOTE
Short-circuiting the LAN ports
If you accidentally short-circuit the two LAN ports of the communications processor, this leads to a malfunction of the network and the communications processor.
To restore the full scope of functions, you may need to reset the communications processor or the Software Controller.

LEDs of the RJ45 sockets

Two LEDs can be found in the frame of each RJ45 socket.

- The green LED lights up when a connection is established (Link LED).
- The yellow LED lights up during sending and receiving (Activity LED).

2.3 Communications processor CP 1625

2.3.1 Interfaces and display elements

Appearance

The following figure shows the most important interfaces of the communications processor CP 1625.

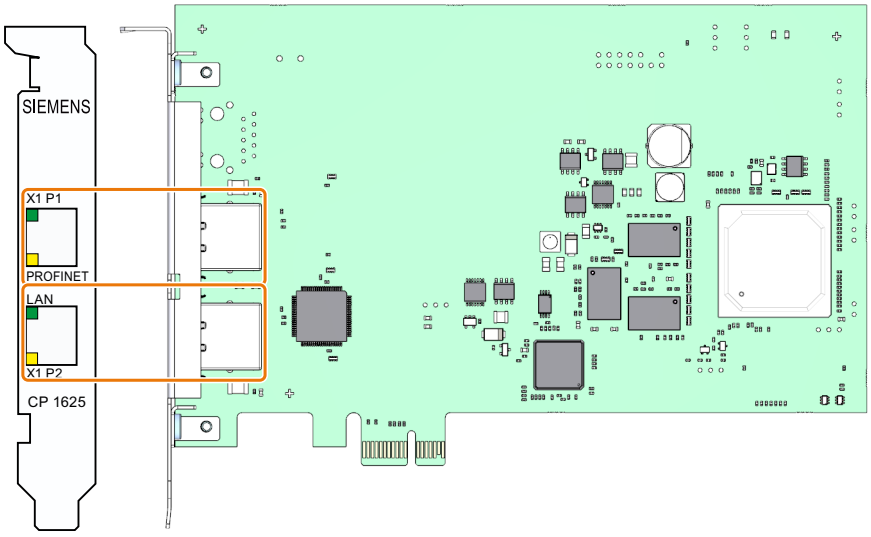


Figure 2-1 View of the CP 1625 interfaces

2.3.2 Properties

Properties

The CP 1625 is a PCIe module for the connection of PCs to Industrial Ethernet.

NOTE

The PROFINET ports must not be connected directly to the Internet.

The essential properties are as follows:

- Optimized for PROFINET IRT
- With Ethernet-Real-Time-ASIC SOC-1
- Two RJ45 sockets for connecting end devices or other network components
- Front LEDs on the RJ45 sockets for efficient self-diagnostics of connection and data exchange (Link and Activity LED)
- Integrated 2-port real-time switch
- Automatic hardware detection is supported

Ethernet

The CP 1625 is intended for operation in Ethernet networks.
It also has the following features:

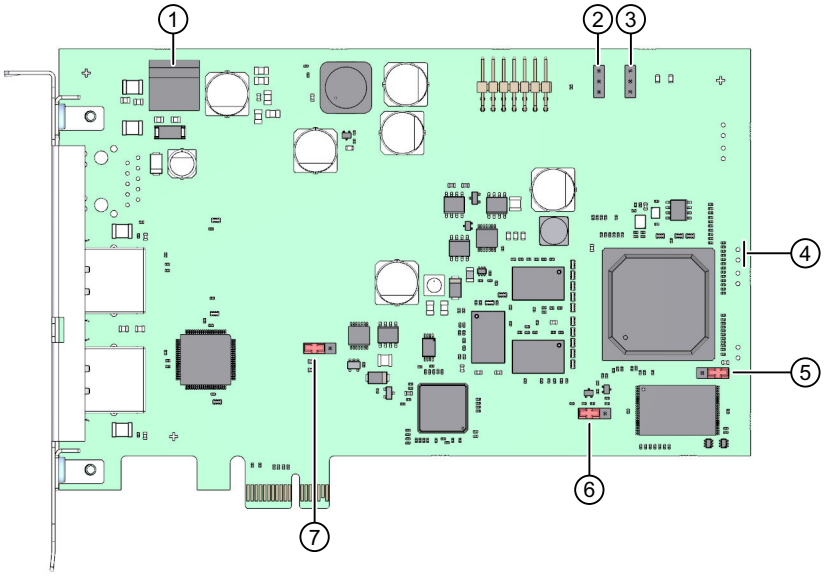
- Connections are designed for 100BASE-TX
- Data transmission speed of 100 Mbps in full/half duplex is supported
- Autonegotiation (can also be turned off)
- Autocrossing

2.4 Communications processor CP 1625Dev

2.4.1 Interfaces and display elements

Appearance

The following figure shows the most important interfaces, jumpers and LEDs of the communications processor CP 1625Dev.

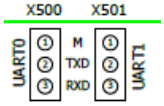


①	X80	Connection for an external 24 V DC power supply
②	X500	UART0
③	X501	UART1
④	X602	Interface for PROFINET certification
⑤	X2200	Jumper for selecting boot source
⑥	X1600	Jumper for selecting restart behavior
⑦	X2000	Jumper for selecting power supply source

Figure 2-2 CP 1625Dev

Interfaces X500 (UART0) and X501 (UART1)

The interface has the numbers ② and ③ in the figure above.



①	M	Ground
②	TXD	Connection for outgoing data (RS232 interface)
③	RXD	Connection for incoming data (RS232 interface)

Figure 2-3 X500-X501

Interface X602

If PROFINET certification of a device based on CP 1625Dev is required, the certification authority uses the XPLL_OUT signal. The signal is available on the circuit board for measuring purposes.

The interface is designated with the number ④ in the figure above.

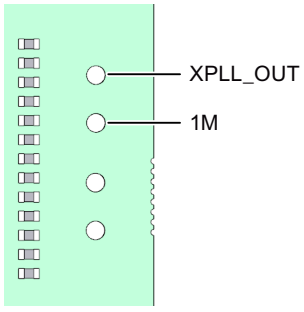


Figure 2-4 X602

Signal	Pin
XPLL_OUT (SYNC Out)	2
GND (1M)	1

Overview for use of the X1600, X2000 and X2200 interfaces/jumpers

Interface/jumper	CP 1625Dev connected	CP 1625Dev external
X1600	X1600 PCIe ① ② ③	X1600 ① ② ③ Manual
X2000	X2000 PCIe ① ② ③	X2000 ① ② ③ EXT

Interface/jumper	CP 1625Dev connected	CP 1625Dev external
X2200	X2200 SPI ③ ② ①	X2200 ③ ② ① NAND

Interface/jumper X1600

At interface X1600 you use the jumper to set whether the CP 1625Dev should perform a restart via the PCIe bus or be manually restarted.

The interface is designated with the number ⑥ in the figure above.

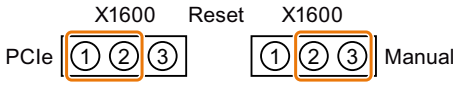


Figure 2-5 X1600

Pin assignment	Description
Pins 1 and 2	Restart via PCIe bus
Pins 2 and 3	Manual restart (with external use of the CP 1625Dev)

Interface/jumper X2000

At interface X2000 you use the jumper to set whether the CP 1625Dev should be operated in an IPC or externally in Development mode.

The interface is designated with the number ⑦ in the figure above.

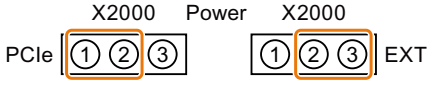


Figure 2-6 X2000

Pin assignment	Description
Pins 1 and 2	Power supply via PCIe bus
Pins 2 and 3	Power supply over X80 (with external use of the CP 1625Dev)

NOTICE
Damage to the IPC or the CP 1625Dev Damage can occur if the jumper is inserted incorrectly on the X2000 interface and the IPC is then connected to a 24 V DC power supply. Set the position of the jumper on the X2000 interface according to the use of the CP 1625.

Interface/jumper X2200

At interface X2200 you use the jumper to set whether the SOC1 is to boot from NAND flash. The interface is designated with the number ⑤ in the figure above.

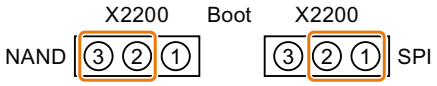


Figure 2-7 X2200

Pin assignment	Description
Pins 1 and 2	Boot from SPI flash (with use of the PCIe bus)
Pins 2 and 3	Boot from NAND flash (with external use of the CP 1625Dev)

2.4.2 Properties

The CP 1625 is a PCIe module for the connection of PCs to Industrial Ethernet.

NOTE

The PROFINET ports must not be connected directly to the Internet.

The essential properties are as follows:

- Optimized for PROFINET IRT
- With Ethernet-Real-Time-ASIC SOC-1
- Two RJ45 sockets for connecting end devices or other network components
- Front LEDs on the RJ45 sockets for efficient self-diagnostics of connection and data exchange (Link and Activity LED)
- Integrated 2-port real-time switch
- Automatic hardware detection is supported
- 24 V DC power supply for operation outside of the PC housing
- Two UART interfaces are available over the header
- Pushbutton for manually restarting the board
- Two LEDs on the board that signal an error or maintenance (Error and Maintenance LED)
- NAND flash
- SYNC Out signal available via the solder joint
- DDR2 memory technology up to 256 MB RAM

External power supply

The CP 1625Dev has the "X80" interface for infeed of an external 24 V DC power supply.

NOTE

Only for stand-alone operation outside an IPC.

Ethernet

The CP 1625Dev is intended for operation in Ethernet networks.
It also has the following features:

- Connections are designed for 100BASE-TX
- Data transmission speed of 100 Mbps in full/half duplex is supported
- Autonegotiation (can also be turned off)
- Autocrossing

Mounting

3

3.1 Installing the holding plate

For use in environments with increased mechanical loads, we recommend mounting of the holding plate included in the scope of delivery. This improves the mechanical stability of the plug-in connection. You fasten the outgoing cables to the holding plate with cable ties.

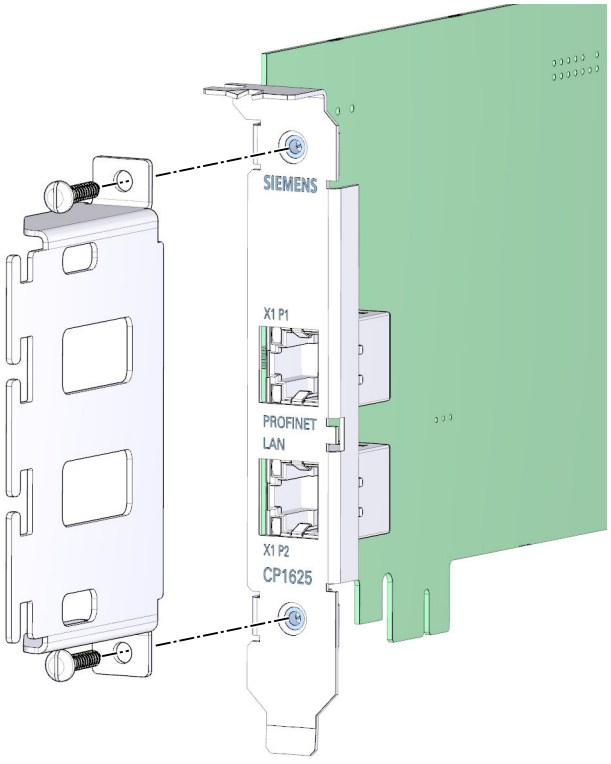


Figure 3-1 Correct mounting of holding plate

Installing/connecting

4

4.1 Installing and connecting the CP 1625

Maximum configuration

A maximum of one CP 1625 is permitted per PC.

Prerequisites and requirements

⚠ WARNING

Do not commission damaged parts

Only put undamaged parts into operation!

- Before installing the CP in your PC, read your PC manual, for example, the section "Procedure for installing PCIe modules". Observe the instructions described in the manual for your PC.
- If available, enable the plug-and-play mechanism in the BIOS of your PC.
- Before installation, make sure that the jumpers are set correctly on the CP 1625Dev. You can find information on this in the section: Interfaces and display elements (Page 12-13).
- The communications processor CP 1625 requires a PCIe slot with master capability.

Installing and connecting the CP 1625

NOTE

Installation only with power disconnected

Opening the PC and inserting or removing submodules is only permitted when the power is disconnected.

Proceed as follows when installing and connecting the CP 1625:

1. Turn off your PC and pull out the power cable connector from the socket.
2. Open the PC housing as described in your PC manual.
3. Remove the cover of a free PCI slot in your PC.
4. Take the CP 1625 out of the packaging.

NOTE

When handling the communications processor, make sure that you do not touch the connectors or the electronic components.

5. Insert the CP 1625 into the PCIe slot according to the instructions. Make sure that the CP 1625 is inserted securely and evenly in the slot socket.
6. Close the PC housing as described in your PC manual.
7. Insert the connecting cable (TP) into the corresponding socket on the front panel of the CP 1625.
8. Insert the power plug into the power socket again.
9. Switch on your PC.

Passive network components

You will find important notes on the use of passive network components in the document "Industrial Ethernet / PROFINET Passive network components" (https://support.industry.siemens.com/cs/ww/en/view/84922825).

Configuration

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After the communications processor is installed in the PC, it needs to be configured. The communications processor CP 1625 is configured in the TIA Portal.

Requirements

- TIA Portal ≥ V15 incl. Update 1
- S7-1500 Software Controller CPU 1507S (F) ≥ V2.5 is installed on the IPC

Reference

You can find additional information on configuration in the TIA Portal and in the CPU 1505SP (F), CPU 1507S (F) Version 2 operating instructions (http://support.automation.siemens.com/WW/view/en/109740725).

Technical specifications

6

Communications processor CP 1625

The following technical specifications apply to the communications processor CP 1625:

Data transfer	
Transmission rate	100 Mbps

Interfaces	
Connection to 10BaseT/100BaseTx	RJ-45 connector (2 units)
Connection to PC	PCI-Express X1 V1.0a Plug & Play

Voltage	
Power supply PCI-Express	3.3 VDC ± 9 %
Supply voltage externally via X80 (rated voltage)	19.2 V DC to 28.8 V DC

Current consumption	
PCI-Express voltage at +3.3 V	Maximum 1.2 A
External supply at +24 V	Maximum 250 mA

Permitted environmental conditions	
Operating temperature	+0 °C ... +55 °C
Transportation and storage temperature	-20 °C ... +70 °C

Construction	
Module format	PC card, short PCIe format • Standard height • half length
Dimensions (H x W x D) in mm	111.2 x 21.6 x 167.15
Weight	110 g
Space required	PCIe slot

Requirements for the external power supply	
Electrical isolation	required
Voltage range	19.2 V DC to 28.8 V DC
CP 1625 current consumption with the PC turned off	Approx. 0.25 A at 24 V

NOTICE

Damage to the IPC and/or the CP 1625Dev

If you connect a plugged CP 1625Dev communications processor to a 24 V DC power supply, this can result in undefined states.

Damage to the IPC and/or the CP 1625Dev communications processor can occur as a consequence.

Do **not** connect a 24 V DC power supply to a plugged CP 1625Dev communications processor.

This product is intended for delivery with a UL-listed power supply unit designated as Class 2 with 24 V DC, 1 A (rated values) and a recommended ambient temperature of 45 °C.

Power supply	
Plug-in connector FMC 1.5 / 2-ST-3.81 (ships with the product) or compatible	• Contact clearance: 3.81 mm • Cable cross section: 0.2 mm^2 ... 1.5 mm^2

⚠ WARNING

External supply

If supplied from a separate source, this must meet the requirements to comply with NEC Class 2.

Standards, approvals and EMC guidelines

A

A.1 Standards and approvals

NOTE

The specified approvals apply only when the corresponding mark is printed on the communications processor.

Recycling and disposal

Figure

For environmentally friendly recycling and disposal of your old equipment, contact a certified electronic waste disposal company and dispose of the equipment according to the applicable regulations in your country.

CE marking

CE

The communications processor CP 1625 meets the requirements and safety objectives of the following guidelines and complies with the harmonized European standards (EN):

- 2014/34/EU ATEX Directive – "Directive of the European Parliament and of the Council of February 26, 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres; Official Journal of the European Union L96, 29/03/2014, pp. 309–356"
- 2014/30/EU "Electromagnetic Compatibility" (EMC Directive)
- 2011/65/EU "Restriction of the use of certain hazardous substances in electrical and electronic equipment" (RoHS Directive)

The EC declarations of conformity are available for the responsible authorities at:

Siemens AG
Digital Factory
Factory Automation
DF FA AS DH AMB
Postfach 1963
D-92209 Amberg

They are also available for download on the Siemens Industry Online Support Web pages, keyword "Declaration of Conformity".

RCM (C-Tick) Declaration of conformity for Australia/New Zealand

The communications processor CP 1625 meets the requirements of the standards.

- AS/NZS 3548
- IEC 61000-6-3

ICES

The communications processor CP 1625 meets the requirements of the Canadian standard ICES-003. The communications processor CP 1625 is classified as a "Class B digital apparatus".

FCC approval

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Siemens AG is not responsible for any radio television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Siemens AG. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user. The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC and ICES rules.

UL

UL file E498473
UL 60950-1 2nd Edition, 2014-10-14 (Information Technology Equipment – Safety – Part 1: General Requirements)
CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment – Safety – Part 1: General Requirements)

ATEX approval

II 3 G Ex ec IIC T4 Gc

According to **EN 60079-7:2015 + A1: 2018** (Electrical apparatus for potentially explosive atmospheres; Part 7: Increased safety "e") and **EN IEC 60079-0:2018** (Electrical apparatus for potentially explosive gas atmospheres - Part 0: General Requirements)
Type Examination Certificate: DEKRA 18ATEX0002 U
Schedule of limitations:

1. The voltage, current, mechanical securement of the factory connection as given in the instruction manual, must be taken into account.
2. The Interface Card shall be installed using a protective cover providing resistance to impact according to EN 60079-0 clause 26.4.2 table 13 (after thermal endurance tests according to clause 26.7 for relevant non-metallic cover) for equipment grouping II and classification high risk for mechanical danger for protective covers.
3. The electrical termination of the device installed in the application shall have a suitable enclosure providing a degree of protection of at least IP54 according to EN 60079-7 clause 4.10.

Service Temperature:
Suitable for T4 classification when installed in an enclosure with an internal air temperature of 0-100 °C.
See product information: ATEX certification for CP 1625 (https://support.industry.siemens.com/cs/ww/en/view/109756565)

UKEx Approval

Type Examination Certificate Number: DEKRA 21UKEX0236U
EN IEC 60079-0:2018 and EN 60079-7:2015 + A1:2018

II 3 G Ex ec IIC T4 Gc

Schedule of limitations:

1. The voltage, current, mechanical securement of the factory connection as given in the instruction manual, must be taken into account.
2. The Interface Card shall be installed using a protective cover providing resistance to impact according to EN 60079-0 clause 26.4.2 table 13 (after thermal endurance tests according to clause 26.7 for relevant non-metallic cover) for equipment grouping II and classification high risk for mechanical danger for protective covers.
3. The electrical termination of the device installed in the application shall have a suitable enclosure providing a degree of protection of at least IP54 according EN 60079-7 clause 4.10.

Service Temperature:

Suitable for T4 classification when installed in an enclosure with an internal air temperature of 0-100 °C.

IECEx Approval

IECEx Certificate No.: IECEx DEK 18.0001U

IEC 60079-0:2017 (Ed.7) and IEC 60079-7:2015 (Ed.5.1)

Code: Ex ec IIC T4 Gc

"Special conditions of Use":

1. The voltage, current, mechanical securement of the factory connection as given in the instruction manual, must be taken into account.
2. The Interface Card shall be installed using a protective cover providing resistance to impact according to IEC 60079-0 clause 26.4.2 table 13 (after thermal endurance tests according to clause 26.7 for relevant non-metallic cover) for equipment grouping II and classification high risk for mechanical danger for protective covers.
3. Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119V. Note that for fail-safe.
4. The component shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

Service Temperature:

Suitable for T4 classification when installed in an enclosure with an internal air temperature of 0 – 100 °C.

CCCEx Approval

In accordance with GB/T 3836.3 (Explosive atmospheres - Part 3: Equipment protection by increased safety "e") and GB/T 3836.1 (Explosive atmospheres - Part 1: Equipment - General requirements).

Ex ec IIC T4 Gc

Specific conditions of safety use:

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in GB/T 16935.1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with GB 3836.3.
- Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

UK Conformity Assessed marking

The communications processor CP 1625 / CP 1625Dev complies with the designated British standards (BS) for programmable logic controllers published in the official consolidated list of the British Government. The communications processor CP 1625 / CP 1625Dev meets the requirements and protection targets of the following regulations and related amendments:

- Electrical Equipment (Safety) Regulations 2016 (Low-Voltage)
- Electromagnetic Compatibility Regulations 2016 (EMC)
- Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Explosion Protection)
- Regulations on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2012 (RoHS).
- Supply of Machinery (Safety) Regulations 2008 for S7 1500/ET 200MP safety components (fail-safe modules)

UK Declarations of Conformity for the respective authorities are available from:
Siemens AG
Digital Industries
Factory Automation
DI FA TI COS TT
P.O. Box 1963
D-92209 Amberg
The UK Declaration of Conformity is also available for download from the Siemens Industry Online Support website under the keyword "Declaration of Conformity".

Korea Certificate KCC-MSIP-REM-S49-PCCP

Note that this device corresponds to limit class A in terms of the emission of radio frequency interference. This device can be used in all areas, except residential areas.
이 기기는 업무용(A급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

Marking for the Eurasian Customs Union

EAC (Eurasian Conformity)
Customs Union of Russia, Belarus and Kazakhstan
Declaration of conformity with the technical requirements of the Customs Union (TR CU).

PROFINET standard

The communications processor CP 1625 is based on the standard IEC 61158 Type 10.

Reference

The certificates for the markings and approvals can be found on the Internet under Service&Support.

A.2 Electromagnetic compatibility

Definition

Electromagnetic compatibility (EMC) is the ability of an electrical installation to function satisfactorily in its electromagnetic environment without interfering with that environment.

The communications processor CP 1625 meets requirements including those of the EMC legislation for the European single market. The prerequisite for this is that the communications processor CP 1625 complies with the requirements and guidelines relating to electrical configuration.

EMC directive

The communications processor meets the requirements of the EC Directive 2004/108/EC (EMC directive).

Use in industrial environments

The communications processor CP 1625 is designed for use in industrial areas. It meets the following standards for this type of use:

- Requirements for emitted interference EN 61000-6-4
- Requirements for immunity to interference EN 61000-6-2

Use in residential, business and commercial environments as well as light industry

The communications processor CP 1625 is designed for use in residential, business and commercial environments as well as light industry. It meets the following standards for this type of use:

- Requirements for emitted interference EN 61000-6-3
- Requirements for immunity to interference EN 61000-6-1

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