

## SIMATIC S7-200



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### *Brochures*

For brochures serving as selection guides for SIMATIC products refer to:

<http://www.siemens.com/simatic/printmaterial>

# SIMATIC S7-200

## Communication

### CP 243-1

#### Overview



ISO	TCP	PN	MRP	IT	IP-R	PG/OP	S7
				●		●	●

- Connection of S7-200 to Industrial Ethernet
  - 1 x RJ45 interface for 10/100 Mbit/s full/half duplex connection with autosensing/autonegotiation and autocrossover function
- Communication services:
  - PG/OP communication
  - S7 communication
- Configuration, remote programming and service with STEP 7 Micro/WIN over Industrial Ethernet possible (program upload and program download, status)
- CPU/CPU communication over Industrial Ethernet possible (client + server, eight S7 connections + one PG connection)
- IT communication
  - Web function
  - E-mail function
  - FTP client function for program-controlled data communication (e.g. DOS, UNIX, Linux, embedded systems)
- FTP server
- An S7 OPC server (e.g. SOFTNET-S7 or S7-1613) allows PLC data to be further processed in PC applications

#### Technical specifications

6GK7 243-1EX01-0XE0	
<b>Product type designation</b>	CP 243-1
<b>Transmission rate</b>	
Transmission rate at interface 1	10 ... 100 Mbit/s
<b>Interfaces</b>	
Number of electrical connections	
• at interface 1 in accordance with Industrial Ethernet	1
• for power supply	1
Design of electrical connection	
• at interface 1 in accordance with Industrial Ethernet	RJ45 port
• for power supply	3-pin terminal strip
<b>Supply voltage, current consumption, power loss</b>	
Type of power supply	DC
Power supply	
• 1 from backplane bus	5 V
• External	24 V
Relative positive tolerance at 24 V DC	20%
Relative negative tolerance at 24 V DC	15%
Current consumed	
• from backplane bus at 5 V DC, typical	0.06 A
• from external power supply with 24 V DC	
- Typical	0.053 A
- Maximum	0.06 A
Effective power loss	1.5 W

6GK7 243-1EX01-0XE0	
<b>Product type designation</b>	CP 243-1
<b>Permitted ambient conditions</b>	
Ambient temperature	
• With vertical installation during operating phase	0 ... 45 °C
• With horizontal installation during operating phase	0 ... 55 °C
• During storage	-40 ... +70 °C
• During transport	-40 ... +70 °C
Ambient temperature - Note	-
Relative humidity at 25 °C without condensation during operating phase, maximum	95%
<b>Design, dimensions and weights</b>	
Module format	S7-200 compact module, double-width
Width	71.2 mm
Height	80 mm
Depth	62 mm
Net weight	0.15 kg
<b>Product properties, functions, components General</b>	
Maximum number of modules per CPU	1
Number of modules - Note	-

### Technical specifications (continued)

6GK7 243-1EX01-0XE0	
<b>Product type designation</b>	<b>CP 243-1</b>
<b>Performance data</b>	
<u>Performance data S7 communication</u>	
Number of possible connections for S7 communication	
• Maximum	8
• Maximum with PG connections	1
• Maximum with PG/OP connections	8
Number of possible connections for S7 communication - Note	-
<u>Performance data IT functions</u>	
Number of possible connections	
• as client with FTP, maximum	1
• as server with HTTP, maximum	4
• as e-mail client, maximum	1

6GK7 243-1EX01-0XE0	
<b>Product type designation</b>	<b>CP 243-1</b>
Number of e-mails with 1024 characters of e-mail client, maximum	32
Number of access privileges of access protection function	8
Storage capacity of user memory as FLASH memory file system	8 Mibyte
Number of possible write cycles of flash memory cells	100,000
<b>Product functions Management, configuration, programming</b>	
Product function: MIB support	No
Protocol is supported SNMP v1	No
Configuration software required	STEP 7-Micro/WIN V4.0 SP8 and higher

# SIMATIC S7-200

## Communication

CP 243-1

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Ordering data	Order No.	Order No.	
<b>CP 243-1 communications processor</b> for connection of SIMATIC S7-200 to Industrial Ethernet; for S7 communication, PG communication, E-mail and WWW server; with electronic manual on CD-ROM German, English, French, Italian, Spanish	<b>6GK7 243-1EX01-0XE0</b>		
<b>SOFTNET Edition 2008 for Industrial Ethernet</b> Software for S7 and open communication, incl. OPC server, PG/OP communication and NCM PC, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A, for 32-bit Windows XP Professional SP2/3; Windows 2003 Server R2, SP2; Windows Vista Business/Ultimate SP1; Windows 2008 Server; German/English <b>SOFTNET-S7 Edition 2008 for Industrial Ethernet</b> up to 64 connections • Single license for 1 installation • Software Update Service for 1 year, with automatic extension; requirement: Current software version • Upgrade from Edition 2006 and higher to Edition 2008 • Upgrade from V6.0, V6.1, V6.2 or V6.3 to Edition 2008 <b>SOFTNET-S7 Lean Edition 2008 for Industrial Ethernet</b> up to 8 connections • Single license for 1 installation • Software Update Service for 1 year, with automatic extension; requirement: Current software version • Upgrade from Edition 2006 and higher to Edition 2008 • Upgrade from V6.0, V6.1, V6.2 or V6.3 to Edition 2008 <b>S7-1613 Edition 2008</b> Software for S7 and open communication, incl. PG/OP communication, OPC server and NCM PC; up to 120 connections, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A, for 32-bit Windows XP Professional SP2/3; Windows 2003 Server R2, SP2; Windows Vista Business/Ultimate SP1; Windows 2008 Server; for CP 1613/CP 1613 A2/CP 1623; German/English • Single license for 1 installation	<b>6GK1 704-1CW71-3AA0</b> <b>6GK1 704-1CW00-3AL0</b> <b>6GK1 704-1CW00-3AE0</b> <b>6GK1 704-1CW00-3AE1</b>  <b>6GK1 704-1LW71-3AA0</b> <b>6GK1 704-1LW00-3AL0</b> <b>6GK1 704-1LW00-3AE0</b> <b>6GK1 704-1LW00-3AE1</b>  <b>6GK1 716-1CB71-3AA0</b>	<b>S7-1613 Edition 2008 (continued)</b> • Software Update Service for 1 year, with automatic extension; requirement: Current software version • Upgrade S7-1613, Edition 2006 or higher, to S7-1613 Edition 2008 • Upgrade S7-1613 from V6.0, V6.1, V6.2 or V6.3 to S7-1613 Edition 2008 <b>STEP 7-Micro/WIN V4 programming software</b> <i>Target system:</i> All CPUs of the SIMATIC S7-200 <i>Prerequisite:</i> Windows 2000/XP on PG or PC <i>Type of delivery:</i> German, English, French, Spanish, Italian, Chinese; with online documentation • Single license • Upgrade Single License <sup>1)</sup> <b>IE FC TP Standard Cable GP 2x2</b> 4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug; PROFINET-compatible; with UL approval; sold by the meter <b>FO Standard Cable GP (50/125)</b> Standard cable, splittable, UL approval, sold by the meter <b>SCALANCE X204-2 Industrial Ethernet switch</b> Industrial Ethernet switches with integral SNMP access, web diagnostics, copper cable diagnostics and PROFINET diagnostics for configuring line, star and ring topologies; four 10/100 Mbit/s RJ45 ports and two FO ports, IE FC RJ45 plugs, RJ45 plugs for Industrial Ethernet with rugged metal enclosure and integral insulation displacement contacts for the connection of the Industrial Ethernet FC installation cables <b>IE FC RJ45 Plug 180</b> 180° cable outlet • 1 unit • 10 units • 50 units	<b>6GK1 716-1CB00-3AL0</b> <b>6GK1 716-1CB00-3AE0</b> <b>6GK1 716-1CB00-3AE1</b>  <b>6ES7 810-2CC03-0YX0</b> <b>6ES7 810-2CC03-0YX3</b>  <b>6XV1 840-2AH10</b>  <b>6XV1 873-2A</b>  <b>6GK5 204-2BB10-2AA3</b>  <b>6GK1 901-1BB10-2AA0</b> <b>6GK1 901-1BB10-2AB0</b> <b>6GK1 901-1BB10-2AE0</b>

A: Subject to export regulations: AL: N and ECCN: EAR99S  
 D: Subject to export regulations: AL: N and ECCN: 5D992

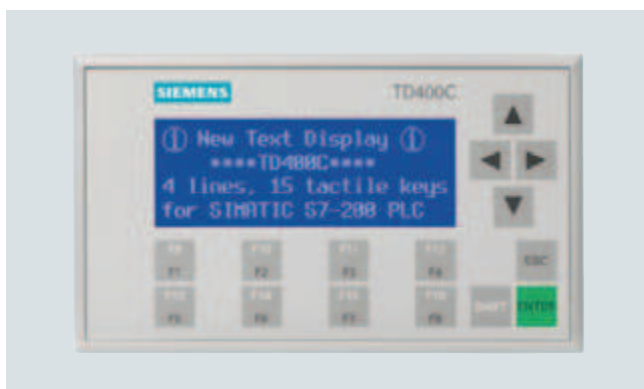
<sup>1)</sup> Upgrade for all previous STEP 7-Micro/WIN and STEP 7-Micro/DOS versions

# SIMATIC S7-200

## Human machine interface

### Text Display TD 400C

#### Overview



- More screen space and extremely good readability thanks to backlit four-line display
- Customizable operator interface with 15 tactile keys
- Acoustic and visual feedback from key operation
- Optimal support of the S7-200:
  - Direct connection to the S7-200 interface via supplied cable
  - No separate power supply required
  - Parameterization with STEP 7-Micro/WIN V4 SP6

#### Technical specifications

6AV6 640-0AA00-0AX1	
<b>Product type designation</b>	Text Display TD 400C
<b>Supply voltage</b>	
Supply voltage	24 V DC
permissible range	DC
<b>Memory</b>	
Usable memory for user data	No info
<b>Configuration</b>	
Configuration tool	MicroWin (to be ordered separately)
<b>Display</b>	
Display type	STN, Black/White
Size	3.7"
Resolution (WxH in pixel)	192 x 64
Backlighting	
• MTBF backlighting (at 25 °C)	about 20,000 hours
<b>Operating mode</b>	
Control elements	Membrane keyboard
Function keys, programmable	15 function keys
Membrane keyboard	Yes
<b>Ambient conditions</b>	
Temperature	
• Operation	0 °C to +50 °C
• Transport, storage	-20 °C to +60 °C

6AV6 640-0AA00-0AX1	
<b>Degree of protection</b>	
Front	IP65, NEMA 4, NEMA 4x, NEMA 12 (when installed)
Rear	IP20
<b>Certifications &amp; standards</b>	
Certifications	CE, FM Class I Div. 2, UL, C-TICK, NEMA 4, NEMA 4x, NEMA 12
<b>Interfaces</b>	
Interfaces	1 x RS485 (max. 187.5 Mbit/s)
<b>Functionality under WinCC flexible</b>	
Security	
• Number of user groups	1
<b>Dimensions and weight</b>	
Weight	
• Weight	0.33 kg

Ordering data	Order No.
<b>TD 400C Text Display</b>	<b>C 6AV6 640-0AA00-0AX1</b>
with customized operator interface on the device front; for connecting to SIMATIC S7-200; can be used from STEP 7-Micro/WIN V4 SP6, incl. connecting cable	
<b>Promotion package</b>	<b>B 6ES7 298-1AA20-0YA3</b>
Consisting of:	
• TD 400C	
• SIMATIC S7-200	
• SIMATIC STEP 7 Micro/WIN V4.0	
• Simulator module	
• Memory module	
• PPI cable	
• CD-ROM with documentation	
• TANOS Box	
<b>Connecting cables</b>	<b>6ES7 901-3EB10-0XA0</b>
for connecting TD 100C/TD 200C or TD 400C to S7-200	
<b>Blank foils</b>	<b>6AV6 671-0AP00-0AX0</b>
for printing customized key-board layouts; 2 perforated films per sheet; 10 sheets per pack	
<b>Accessories</b>	
Accessories for supplementary ordering	See Catalog ST 80

B: Subject to export regulations: AL: N and ECCN: EAR99T  
 C: Subject to export regulations: AL: N and ECCN: EAR99H