

### product type designation



### CP 443-1 Advanced

Communications processor CP 443-1 Advanced 1x 10/100/1000 Mbps, 4x 10/100 Mbps (IE switch) RJ45 ports; ISO; TCP; UDP; PROFINET IO controller; S7 communication; Open communication (send/receive) S7 routing; IP configuration via DHCP/block; IP access control list; time-of-day synchronization; extended web diagnostics; Fast Startup; PROFinergy support; IP routing; FTP; Web server; email; please note SIOS ID: 109799025

transfer rate	
transfer rate	
<ul style="list-style-type: none"> <li>at the 1st interface</li> </ul>	10 ... 1000 Mbit/s
<ul style="list-style-type: none"> <li>at the 2nd interface</li> </ul>	10 ... 100 Mbit/s
interfaces	
number of interfaces / according to Industrial Ethernet	5
number of electrical connections	
<ul style="list-style-type: none"> <li>at the 1st interface / according to Industrial Ethernet</li> </ul>	1
<ul style="list-style-type: none"> <li>at the 2nd interface / according to Industrial Ethernet</li> </ul>	4
type of electrical connection	
<ul style="list-style-type: none"> <li>at the 1st interface / according to Industrial Ethernet</li> </ul>	RJ45 port
<ul style="list-style-type: none"> <li>at the 2nd interface / according to Industrial Ethernet</li> </ul>	RJ45 port
design of the removable storage	
<ul style="list-style-type: none"> <li>C-PLUG</li> </ul>	Yes
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage / 1 / from backplane bus	5 V
relative symmetrical tolerance / at DC	
<ul style="list-style-type: none"> <li>at 5 V</li> </ul>	5 %
consumed current	
<ul style="list-style-type: none"> <li>from backplane bus / at DC / at 5 V / typical</li> </ul>	1.8 A
power loss [W]	9 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	0 ... 60 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +70 °C
relative humidity	
<ul style="list-style-type: none"> <li>at 25 °C / without condensation / during operation / maximum</li> </ul>	95 %
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-400 single width
width	25 mm
height	290 mm
depth	210 mm
net weight	0.7 kg
product features, product functions, product components / general	
number of units	

<ul style="list-style-type: none"> <li>per CPU / maximum</li> <li>note</li> </ul>	14 max. 4 as PN IO ctrl.
<b>performance data / open communication</b>	
number of possible connections / for open communication / by means of SEND/RECEIVE blocks / maximum	64
data volume	
<ul style="list-style-type: none"> <li>as user data per ISO connection / for open communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>as user data per ISO on TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>as user data per TCP connection / for open communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	8 Kibyte
<ul style="list-style-type: none"> <li>as user data per UDP connection / for open IE communication / by means of SEND/RECEIVE blocks / maximum</li> </ul>	2 Kibyte
number of possible connections / for open communication	
<ul style="list-style-type: none"> <li>by means of T blocks / maximum</li> </ul>	64
data volume	
<ul style="list-style-type: none"> <li>as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum</li> </ul>	1452 byte
<b>performance data / S7 communication</b>	
number of possible connections / for S7 communication	
<ul style="list-style-type: none"> <li>maximum</li> <li>with PG connections / maximum</li> </ul>	128; when using several CPUs 2
<b>performance data / multi-protocol mode</b>	
number of active connections / with multi-protocol mode	128
<b>performance data / IT functions</b>	
number of possible connections	
<ul style="list-style-type: none"> <li>as client / by means of FTP / maximum</li> <li>as server / by means of FTP / maximum</li> </ul>	20 10
number of possible connections	
<ul style="list-style-type: none"> <li>as server / by means of HTTP / maximum</li> <li>as email client / maximum</li> </ul>	4 1
data volume / as user data for email / maximum	8 Kibyte
storage capacity / of the user memory	
<ul style="list-style-type: none"> <li>as flash memory file system</li> <li>as RAM</li> <li>additionally buffered as RAM via central backup battery</li> </ul>	30 Mibyte 16 Mibyte 512 Kibyte
number of possible write cycles / of the flash memory cells	100000
<b>performance data / PROFINET communication / as PN IO controller</b>	
product function / PROFINET IO controller	Yes
number of PN IO devices / on PROFINET IO controller / operable / total	128
number of PN IO IRT devices / on PROFINET IO controller / operable	64
number of external PN IO lines / with PROFINET / per rack	4
data volume	
<ul style="list-style-type: none"> <li>as user data for input variables / as PROFINET IO controller / maximum</li> <li>as user data for output variables / as PROFINET IO controller / maximum</li> <li>as user data for input variables per PN IO device / as PROFINET IO controller / maximum</li> <li>as user data for output variables per PN IO device / as PROFINET IO controller / maximum</li> <li>as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum</li> <li>as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum</li> </ul>	4 Kibyte 4 Kibyte 1433 byte 1433 byte 240 byte 240 byte
<b>product functions / management, configuration, engineering</b>	
product function / MIB support	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>SNMP v1</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• SNMP v3</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• DCP</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• LLDP</li> </ul>	Yes
configuration software	
<ul style="list-style-type: none"> <li>• required</li> </ul>	STEP 7 V5.5 SP3 or higher / STEP 7 Professional V12 (TIA Portal) or higher
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
<b>product functions / diagnostics</b>	
product function / web-based diagnostics	Yes
<b>product functions / switch</b>	
product feature / switch	Yes
product function	
<ul style="list-style-type: none"> <li>• switch-managed</li> </ul>	No
<ul style="list-style-type: none"> <li>• with IRT / PROFINET IO switch</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• configuration with STEP 7</li> </ul>	Yes
<b>product functions / redundancy</b>	
product function	
<ul style="list-style-type: none"> <li>• ring redundancy</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• redundancy manager</li> </ul>	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
<b>product functions / security</b>	
firewall version	stateful inspection
product function / with VPN connection	IPSec
type of encryption algorithms / with VPN connection	AES-256, AES-192, AES-128, 3DES-168, DES-56
type of authentication procedure / with VPN connection	Preshared key (PSK), X.509v3 certificates
type of hashing algorithms / with VPN connection	MD5, SHA-1
number of possible connections / with VPN connection	32
product function	
<ul style="list-style-type: none"> <li>• password protection for Web applications</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• ACL - IP-based</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• ACL - IP-based for PLC/routing</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• switch-off of non-required services</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• blocking of communication via physical ports</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• log file for unauthorized access</li> </ul>	No
<b>product functions / time</b>	
product function / SICLOCK support	Yes
product function / pass on time synchronization	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• NTP</li> </ul>	Yes
<b>standards, specifications, approvals</b>	
reference code	
<ul style="list-style-type: none"> <li>• according to IEC 81346-2:2019</li> </ul>	KEC
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / KC approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
certificate of suitability / EAC approval	Yes
<b>standards, specifications, approvals / hazardous environments / header</b>	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
<b>standards, specifications, approvals / marine classification / header</b>	
Marine classification association / American Bureau of Shipping Europe Ltd. (ABS)	Yes
Marine classification association / French marine classification society (BV)	Yes
Marine classification association / Chinese Classification Society (CCS)	Yes
Marine classification association / Det Norske Veritas (DNV)	Yes

Marine classification association / Lloyds Register of Shipping (LRS)	Yes				
Marine classification association / Nippon Kaiji Kyokai (NK)	Yes				
<b>standards, specifications, approvals / Environmental Product Declaration</b>					
Environmental Product Declaration	Yes				
global warming potential [CO2 eq]					
<ul style="list-style-type: none"> <li>total</li> <li>during manufacturing</li> <li>during operation</li> <li>after end of life</li> </ul>	<p>350.22 kg</p> <p>65.61 kg</p> <p>281.89 kg</p> <p>2.72 kg</p>				
<b>further information / internet links</b>					
internet link					
<ul style="list-style-type: none"> <li>to website: Selection guide for cables and connectors</li> <li>to web page: selection aid TIA Selection Tool</li> <li>to website: Industrial communication</li> <li>to web page: SiePortal</li> <li>to website: Image database</li> <li>to website: CAX-Download-Manager</li> <li>to website: Industry Online Support</li> </ul>	<p><a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a></p> <p><a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a></p> <p><a href="https://www.siemens.com/simatic-net">https://www.siemens.com/simatic-net</a></p> <p><a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a></p> <p><a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a></p> <p><a href="https://siemens.com/cax">https://siemens.com/cax</a></p> <p><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a></p>				
<b>security information</b>					
security information	<p>Siemens provides products and solutions with industrial cybersecurity 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 cybersecurity 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 cybersecurity measures that may be implemented, please visit <a href="http://www.siemens.com/cybersecurity-industry">www.siemens.com/cybersecurity-industry</a>. 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 customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under <a href="https://www.siemens.com/cert">https://www.siemens.com/cert</a>. (V4.7)</p>				
<b>Approvals / Certificates</b>					
<b>General Product Approval</b>					
 EG-Konf.	<a href="#">Declaration of Conformity</a>		 CCC	<a href="#">China RoHS</a>	
<b>General Product Approval</b>		<b>EMV</b>	<b>For use in hazardous locations</b>		
 UL	<a href="#">Miscellaneous</a>	 RCM	<a href="#">KC</a>	 ATEX	 IECEX
<b>For use in hazardous locations</b>		<b>Maritime application</b>			
<a href="#">FM</a>	<a href="#">CCC-Ex</a>	 ABS	 BUREAU VERITAS	 DNV	 LRS
<b>Maritime application</b>		<b>Environment</b>			



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